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the

Journal

*of the association for physical
and mental rehabilitation*



JANUARY-FEBRUARY, 1956

VOL. 10, No. 1

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The Journal of the Association for
Physical and Mental Rehabilitation
JANUARY–FEBRUARY, 1956

Volume 10

Number 1

Published Bimonthly
by the Association for
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Tel. BRyant 9-9642

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Foreign \$5.50

Single Copies \$1.00

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J.A.P.M.R.—Jan.-Feb., 1956

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THE JOURNAL OF THE ASSOCIATION FOR PHYSICAL AND MENTAL REHABILITATION

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REPRINTS: Should be ordered when manuscript is submitted. They may be purchased at the following prices:

No. Pages	100	200	300	400	500	1000	100 Add.
1	\$ 6.50	\$ 7.75	\$ 8.75	\$ 9.75	\$10.75	\$15.00	\$.75
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CONTRIBUTION OF NEW DRUGS TO A THERAPEUTIC MILIEU*

MILTON GREENBLATT, M.D.**

We hear a great deal about therapeutic atmosphere, milieu, and community and this usually implies that certain "informal" or intangible elements in the hospital have great therapeutic value. Much of the new interest in this concept comes from social scientists who have recently become fascinated by the study of the hospital as a social system or as a culture different from that of the general community. An association or collaboration between social scientists and hospital administrators has sprung up in some areas that many think will contribute greatly to sound hospital practice.

What is a therapeutic milieu or a therapeutic community? We may assume that there is no standard model but that many kinds of therapeutic communities may exist for different geographic locations, populations, staff, treatment methods, and even periods of history. One outstanding example of a therapeutic community based on an unusual set of principles is that of the neuropsychiatric unit of Maxwell Jones in Belmont, England. Here, there are 100 patients—essentially chronic neurotic and psychopathics—and 25 staff members. The total group of 125 meets ever morning to work out the conditions of living and treatment that are applied to these patients. Authority is greatly leveled and the patients take a very responsible role. They participate through direct democratic action, to an extent undreamed of, in a therapeutic society. The important thing about Maxwell Jones' community is not so much the form of the society as the fact that this kind of community management seems to pay off in the treatment of chronic neurotic and psychopathic cases that were refractory to all other treatment before.

A therapeutic milieu or community can be conceived as an ideal pattern toward which all hospitals would like to gravitate, but which has become a reality or near reality in only a very few advanced centers. The therapeutic hospital is perhaps best understood when contrasted with its opposite—the custodial hospital. In the custodial hospital, the social structure is rigid. There is emphasis on hierarchy and authority, with downward flow of power and communication. Upward channels of communication are closed.

*Presented at the Ninth Clinical and Scientific Conference, The Association for Physical and Mental Rehabilitation, Boston, Mass., June 28, 1955.

**Director of Research, Boston Psychopathic Hospital.

Roles are very restrictive with little change or modification of roles permitted. There is concern over "security"—security against injury, suicide, escape, etc. The emphasis is on a custodial type of patient care rather than on treatment. There is factionalism and submerged hostilities; a self-orientation rather than patient orientation. Such a hospital does not foster creativity from either personnel or patients, and usually shows little internal change, or trial and error experimentation over the long run.

The therapeutic hospital, by contrast, is flexible in its structure. It de-emphasizes authority and hierarchy; encourages communication in all directions, especially upward; likes to make roles flexible and changeable; looks for new roles, and new talents in patients and staff; is not greatly concerned with security; and does not find every instance of injury, suicide, or escape an excuse to clamp down on privileges and freedoms. It is treatment oriented, usually with high enthusiasm. The total social group is cathectic rather than the individual or small factions. Hostilities are more readily expressed and worked through. There is reward for initiative and creativity, and an emphasis upon change, and trial and error experimentation with all kinds of patient management.

Such a discussion of two theoretically contrasting hospitals may appear to some to be esoteric, academic, and far fetched. The practical aspect of this differentiation is that in the custodial hospital, the custodial personality is rampant; and where the custodial personality is rampant, fewer patients are likely to get well. All this, of course, is because getting well is an interpersonal matter between patients and staff; and only where the interpersonal atmosphere or climate is optimal, do we get the highest recovery rates.

What about the custodial versus the non-custodial personality? This has been studied at considerable length by social scientists at the Boston Psychopathic Hospital. The custodial personality is one that sees the mentally ill person as belonging to an out group—a group different from himself. The sick person is conceived as suffering from deeply ingrained or inherited constitutional defects. There is an aura of sin and sex about their feeling regarding etiology. They see the individual as not likely to change through interaction with others, and ascribe

to the patient a poor prognosis. They see the patient as unpredictable, untrustworthy, and perhaps dangerous. By contrast, the treatment oriented attitude is completely the reverse of all that has been stated, with an emphasis on good prognosis, illness due to life experiences similar to what all of us go through, and a feeling for one's part in the therapeutic process. The individual is not seen as an out-group member, but as being similar to oneself. There is every evidence to suggest that the way people in the institution think about mental illness makes a difference in the response of patients to treatment.

These are some of the factors which go into the creation of a therapeutic or non-therapeutic milieu. Within that milieu operate all the specific therapies we can think about. Psychotherapy, or electric shock treatment, for instance, may have a greater effect on depressive cases in a therapeutic milieu than in a non-therapeutic milieu; likewise for insulin and for drugs. On the other hand, if the milieu has great therapeutic force in itself, it may, to a large extent, perhaps even completely, take the place of more specific therapies. I might, at this point, add that those who think of the therapeutic community in the terms in which I have structured it, believe profoundly in the importance of every member of the community who may come in contact with patients. They believe that they are participants in the therapeutic team and that they have therapeutic power. Furthermore, the therapeutic influence that any given person may exert upon a patient is believed to be correlated with how often and how intensely he interacts with the patient. Thus, in the case of corrective therapists, the contact may be frequent and intensive; and they would be expected to exert, under favorable conditions, an enormous force towards patient growth and improvement.

In recent years, two new drugs have appeared that promise to do much for the mentally ill and for the hospital community. These are thorazine (chlorpromazine) and serpasil (*rauwolfia serpentina*). The former is a new compound, recently developed by the French, while experimenting with phenothiazines used in narcosis. The latter, serpasil, has been known for many years in India as an "insanity herb," and has been quoted in Indian medical journals as far back as 1931. Although chemically different, and from different parts of the world, these two drugs are quite similar in their effects on patients. They are called "tranquilizers" because of their calming or sedative action and, in addition, they have the advantage that in moderate doses, they do not put patients to sleep. Thus, both drugs have been used extensively in conditions of anxiety, tension, excitement, overactivity—conditions which abound in psy-

chiatry—and which are helped only to an extent by psychotherapy or electric shock treatment. Dr. Lehman of Verdun Protestant Hospital in Canada, who has extensive experience, has said that the drug is indicated in any acute excitement which threatens to overwhelm the personality. In reducing tension and excitement, it permits the individual to withstand acute disruptive stresses until such time as he can bring his resources to cope more successfully upon his problems.

You can well understand how a drug that can do this has been seized upon as a most valuable therapeutic agent by everyone. As with any new therapeutic weapon, there are extraordinary claims. To some extent, at least, it would appear the claims are justified. Acute excitements of short duration have been favorably affected, especially manias. The number of patients requiring electric shock treatment and insulin treatment have been reduced; and even patients scheduled for lobotomy have sometimes been aided by one of the drugs, so that operation was not necessary. Cases that have improved partially following somatic therapies, but still showing excitement, tension, and unpredictable behavior have also been helped by the drug.

At present, several research centers are attempting to ascertain the value of these drugs in chronic cases. There are now numerous observations that refractory cases of chronic schizophrenia may sometimes be helped by intensive medication, especially with serpasil. Speaking in terms of conventional diagnoses, it is obvious that acute experiments may occur in a wide range of neuropsychiatric cases including neuroses and the psychoses, as well as psychopathic personalities. There was one report, for example, that a delinquent youngster was changed from "bad" to "good" by suitable doses of the drug. On the other side of the balance, one fairly clear finding is that psychotic depression is not helped by the medication, and may be made worse.

What happens to the social community as a result of the use of these drugs?

The improvement in clinical symptoms, i.e. reduction of tension, excitement, turmoil, and explosive behavior, has helped patients to be better integrated, more socially responsive, more communicative, and more accessible both to psychotherapy and the ancillary treatments such as physical, corrective, occupational, and recreational therapies. The ward is a quieter and more pleasant place; there are fewer assaults and injuries; less seclusion and restraint is required; and nursing personnel are freer to give attention to other patients, or the ward as a whole. The violent wards become quieter, easier to manage, and as a result there is good effect on morale

throughout the hospital. Patients and personnel who have lived in a state of fear that they will be injured or assaulted, or have been unable to carry out their jobs effectively because of resistive and unpredictable aggressive behavior of patients, are less tense and more at ease on the ward. The vicious circle of fear of patients increasing that of staff, and vice versa, tends to be broken.

However, all is not entirely rosy, for the use of drugs necessitates in many instances, a change in the customary pattern of hospital activity. Many personnel who have felt that the main rewarding challenge in their jobs has been to work with active excited patients, have found that patients on thorazine and serpasil are difficult to motivate or mobilize into individual or group activities. I have heard ancillary personnel speak of heavily sedated patients as "walking zombies" who are impossible to activate, and their own participation in activities may have a depressing effect on morale in occupational therapy.

Enthusiasm for these drugs should be tempered by conservatism because of undesirable side effects that occur not infrequently with their administration. Some of these may well be noted first by special therapists who are alerted to these manifestations, inasmuch as they may have closer contact with these patients than psychiatrists.

In the beginning, considerable fear was expressed because of the leukopenia effect of thorazine. To date, I believe, three cases of leukopenia death have been reported with that drug which, considering the thousands of cases that have received medication, is not striking nor is it sufficient to contraindicate the drug where it is definitely needed. However, caution should be exercised in giving thorazine to patients who have an acute infection that might require a healthy leukocytic response for its resolution. Hepatitis is another toxic effect of thorazine which should be carefully watched for, and it is a routine in our hospital to do liver studies both before and during drug administration. Skin rashes and other allergic toxic manifestations with this drug have also been reported.

For serpasil, some characteristic undesirable manifestations are nasal stuffiness, edema of the eyes, gastrointestinal disturbances, and parasympathetic effects such as brachycardia and hypotension to be described below.

Side effects shown more or less by both drugs may be considered together:

1. Both drugs in large doses may produce drowsiness.
2. Both drugs may produce pronounced autonomic reactions such as lowering of blood pressure to

unphysiological levels with manifestations of weakness, faintness, dizziness, and orthostatic difficulties. Some patients may have very sensitive cardiovascular mechanisms with prolonged lowering of blood pressure. Blood pressure reading should be taken on all patients during the first few days, and for longer periods on all others who complain of such symptoms. Fortunately, for most people, if medication is continued, hypotensive effects tend to subside.

3. Both drugs produce parkinsonism in a small percentage of cases—stiffness, rigidity, loss of associated movements, difficulty in locomotion, tremor, and even retropulsion, and propulsion. This will doubtless be a factor to contend with if physical therapy is recommended. Whether the physical therapies can remove the stiffness produced by the drug, I do not know. We do know that the condition is reversible if dosage is increased.
4. Finally, both drugs lead to an intensification of dreams reported by the patient. This may turn out to be of some help in the psychotherapeutic process.

Generally, we are inclined to view new drugs in the treatment of neuropsychiatric patients with skepticism. Almost all drugs used in the past have been disappointing. The sedatives of the barbiturate series, for example, in the past have had a great day and are, to some extent, still used; but these sedatives have not been the answer to neuropsychiatry. The major objections in the case of the barbiturates have been that they have produced drowsiness, and over the long run—toxicity, making psychotherapy and other treatments more difficult. Often they induce a mild organic state with poor emotional control and increased instability of behavior. Many patients become neurotically dependent, using them as a crutch or a defense against working through their psychological problems. The effect on hospital community has sometimes been very bad. The excessive and prolonged use of drugs has led to mildly intoxicated wards, de-emphasis on interpersonal therapy, and the development of a therapeutic milieu. The excessive use of barbiturates and paraldehyde has frequently prolonged, and sometimes caused death, in cases of D.T.'s that tolerated these drugs very poorly.

Stimulant drugs, on the other hand, of the benzadrine series give a short period of euphoria, a "jag" and hyperirritability. Soon they lose their effectiveness so that patients require increased quantities.

Continued on Page 16

NEW TECHNIQUES IN TRAINING THE BLIND*

REV. THOMAS J. CARROLL**

My topic today is "New Techniques In Training the Blind," but I am going to talk about more than that. I am going to talk about new thinking in training the blind as well as new techniques, for the two go together.

There is new thinking in training the blind. Much of our field grew out of education. For a hundred years, thinking in the field of training the adult blind was based on thinking in the education of the blind child. As you know, the training of the blind child is "habilitation" rather than "rehabilitation." The field of education has done its thinking (and continues to do it to meet the changing times). But I say to you, in the area of rehabilitation there is a vast amount of new thinking that has yet to be done.

But first, to the Conference theme: "Rehabilitation, an Educational Challenge." To us in work for the adult-blind, who are "non-educators," education is a primary job—the education of the public. Public education is essential; education on the nature of the handicap; on its effect on individual persons; on the idea which Dr. Menninger sums up by saying, "This is not a question of working with abnormal persons but rather a question of working with normal persons under abnormal circumstances." It is education of the public on the need for a professional attitude in work for the blind and the need for professional personnel.

Our own agency is doing a job in public education, which we think is important, in the publication of our newspaper *Listen*. It is not a Braille paper but an ink-print paper sent to every blind person in Massachusetts (and to many outside) and to representatives of the general public whom we want to educate about blindness. It is not Braille, partly because less than 25% of the blind read Braille. It is an ink-print paper intended to be read to the blind person by members of his family.

Blindness is a multiple trauma which has a tremendous effect upon the individual and also on members of his family. The effect is sometimes deep and unconscious but this does not mean that we can leave it alone. To the family of the blind person the handi-

cap of blindness is an unfamiliar thing—with the exception of this one individual. It is essential that they know something about others who are similarly handicapped and that the picture they have be not a stereotyped one. We send this newspaper to them, a newspaper with items not only of successes of blind persons but of failures as well, which tells of the blind saint and of the blind sinner, which tells of the blind hero and the blind heel. If we are to get across the idea of "normalcy," we must give the whole picture and this is what our newspaper intends to do. Is it new thinking in the field? Well, you have only to look at the many house organs which are filled with success stories seemingly intended to make the reader believe that all blind persons have extraordinary talents and you will know the answer.

An important area of new thinking in the field is the notion of the multiple handicap—that blindness itself is a "multiple handicap." It is a form of analysis of blindness and of what it does to a person. We say that following the physical loss of sight itself, there are many other losses. I will list the twenty losses as we see them, not intending to explain them for lack of time. To us they are as follows:

1. Loss of physical integrity.
2. Loss of confidence in the remaining senses.
3. Loss of reality contact with the environment.
4. Loss of visual background, of light and change.
5. Loss of light-security. (I want to say this much here, that the blind person does not live in darkness. To say that he does is physically and biologically untrue).
6. The loss of visual perception of the beautiful.
7. The loss of the visual perception of the pleasurable.
8. The loss of mobility.—(A major loss).
9. The loss of ease of written communication.
10. The loss of ease of spoken communication.
11. The loss of informational progress.
12. The loss of recreation.
13. The loss of techniques of daily living.

*Presented at the Ninth Clinical and Scientific Conference, Association for Physical and Mental Rehabilitation, Boston, Mass., June, 1955.

**Director, Catholic Guild for the Blind, Newton, Mass.

14. The loss of career, of vocational goal, of job opportunity.
15. The loss of financial security.
16. The loss of personal independence.
17. The loss of social adequacy—(one of the most severe).
18. The loss of obscurity, of anonymity.
19. The loss of self-esteem.
20. The loss of total personality organization.

The analysis of the handicap (whether or not we accept the arbitrary number 20 for the losses involved) is certainly something of importance in new thinking, for it has its effects in new thinking.

New thinking and new techniques are closely conjoined when one approaches the idea of the multi-disciplinary center. Some may say, "What is new thinking about this?" I ask you to look at work for the blind and just see how new this is. It goes back only as far as the Army's Rehabilitation Program at Old Farms Convalescent Hospital at Avon, Connecticut, in World War II. This was the great advance in rehabilitation work for the adult blind in our day. We moved from there into the beginnings of a rehabilitation center for civilians in North Carolina, and since Army's rehabilitation program closed, there has been the extraordinary good work of the Veterans Administration's Physical Medicine and Rehabilitation Section at Hines Hospital.

The VA Rehabilitation Center at Hines has done an outstanding job. I must admit that I had certain misgivings when Hines started its program. The Army was closing out its Avon Program. I was one of those who strongly wanted the Army to carry on. I was afraid of the old Veterans Bureau technique. I did not know how long the new mood in the Physical Medicine and Rehabilitation Section of VA could last.

Now in 1955, I am glad that the VA took over, glad that it has done and is doing the job in the tremendous way that it is being done in Hines. I hope many of you will see the VA picture on this subject, "The Long Cane," which incidentally is an award picture for documentaries. It is excellent in giving a portion of the picture of what is being done by the VA at Hines.

There are in addition possibly some half dozen civilian rehabilitation centers for the blind deserving of the name "rehabilitation centers" spread from California to the East Coast.

It is a special one of these civilian rehabilitation centers that I am going to talk about to you today—our own center, St. Paul's Rehabilitation Center for

the Newly Blind, New England's only adult rehabilitation center. St. Paul's was opened in March, 1954. It takes ten trainees at a time (blinded adults) for a period of twelve weeks. So far most of our trainees have come from the New England States although one in the present group is from Missouri.

We know that we have something in St. Paul's that represents new thinking. And, of course, we figure it as good thinking. St. Paul's attempts a synthesis growing out of the analysis which sees blindness as a multiple handicap.

Our statement of rehabilitation principles is something like this. We believe in a complete facing of the totality and finality of the handicap. Our thinking on that goes along very well with the philosophy spelled out by Dr. Louis Cholden, the idea that a loss, a physical loss, involves a death and a bereavement—that one must go through a period of shock and then through a period of mourning or grief.

I follow this very strongly with regard to the loss of sight. And, incidentally, we run into some severe problems here, because the loss of sight has a very deep meaning to the individual involved as well as to us who have sight. We sighted people have underlying fears of loss of sight. Apparently in the unconscious we deeply fear the loss of sight and it has grave meaning with regard to self image, to ego strength.

At St. Paul's we are doing something that is a little out of line in the field of work for the blind in this sense that there has long been a thinking in the field of adult work with the blind that we should take the newly blinded person, pat him on the back, say that it's not too bad, tell him to buck up and make the most of it, and then give him all sorts of aid and assistance.

Instead we hold to the complete facing of reality, what I have called the facing of the finality and totality of the handicap. How dare we do it? We dare do it because we have the professional staff to aid and assist. The question then arises as to what this does to areas of delicate adjustment, what it does to "denial" and "escape." Certainly at times there are difficulties here, but if we are going to get to a good adjustment we must be willing to attack the false adjustments that interfere with rehabilitation.

In the facing of the finality of the handicap we teach the trainee a pretty complete understanding of the handicap in general, and we attempt to help him understand just what it means to him. When this is done we seek optimum restoration of the lost factors where possible, and where it is impossible then we seek to make a realistic substitution.

We sometimes describe the rehabilitation process as a process of "weaning without the withdrawal of love." In the beginning of the rehabilitation program the trainee must find his strength in the staff, in a staff that is capable of giving him the strength. As the program moves forward, as the process of rehabilitation goes on, then he must find that strength within himself.

What of the new techniques? I could talk to you about the new techniques for teaching braille as a means of restoring written communication or the new techniques of teaching handwriting but I prefer to skip over these and skip over the new gadgets as well, as time is so short.

I do want to mention briefly the Hoover Cane Technique developed by Lieutenant Richard Hoover during the Army's Program at Valley Forge General Hospital (now Dr. Hoover, Ophthalmologist of Johns Hopkins Medical Center). It is a technique that has been still more highly developed at Hines Hospital.

An important thing here is that a professional background is needed in the trainer or therapist. There is "know-how" involved and knowledge. Knowledge of what? Of physical education? Certainly. But a specialized training over and beyond that, and orientation into this particular field. And here again we meet with something that is continually encountered—the attempt on the part of many to break down professional standards. We are strongly interested in raising defenses against this breaking down of standards. Here is a scientific technique being used for the first time in centuries of work for the blind being taught by people with professional backgrounds, and we must seek to hold the standards at least to the point where they are rather than letting others rush in to attempt to train in this important area without professional background.

At St. Paul's we have introduced a new technique in the "total use of the team"—not just having many disciplines on the staff but bringing them together. The technique? At St. Paul's we have group therapy for staff. Why? Well, you will recall that I said that blindness has an effect on us, on the sighted public, on the public at large. Blindness is a traumatic thing, a multiple repetitive trauma. Few of us can be exposed to this type of thing over a period of time without having some of our own difficulties brought to the surface. It is, therefore, a help to be able to sit in once a week on a group session which

helps us to understand our own feelings and, thus, to better to understand the people we are working with.

We use group therapy as well for the trainees. This is not a "gripe session" given a fancy name. I am speaking of true group therapy and I believe it is of great help.

Tied in with this we have a course on the analysis of blindness as a multiple handicap. We have a course in self-appraisal taught by the staff psychiatrist. We have a course in the art of visualization. Perhaps, even though the time is brief, I should mention something of this since it is so new. Here is the thinking behind it: We are dealing with adult persons who have lost their sight, persons who grew up with sight, persons who have a great many images and memory. We want to stimulate visual imagery so that these blinded persons will be able to make use of their visual memories and therefore will be better able to visualize their surroundings rather than to live in a visual vacuum.

The course in the art of visualization is closely tied to another called "Imagery Stimulation." Out of these we would like to arrive at a point where the blinded person who holds or touches something will not only get a kinesthetic sense of holding or touching an object but will at that point "see" the object in his "mind's eye."

We have a course which attempts to develop the elements of spatial relations. This one is closely allied with the course in mobility restoration. We have too, a course in fencing, the first that I know of used at a rehabilitation center for the blind. It is used to develop a sense of balance, poise, and the ability to make quick recovery; it is used to develop posture. It is closely tied in with the Hoover Cane Technique—for the foil like the cane is a tool to extend the sense of touch.

And with all these things annually we have a group dynamics re-evaluation of St. Paul's, a re-evaluation of techniques, of staff, of scheduling, and even of our basic analysis.

For we do not think by any means that we have reached the peak. We believe that there is much more to be done in the developing of new thinking and new techniques in this field. And we hope that if the day ever comes when we quit growing or lose the ability to change and to develop we'll have sense enough to leave the field.

ENROLL A NEW MEMBER TODAY!

REHABILITATION IN MULTIPLE SCLEROSIS*

JOSEPH B. ROGOFF, M.D.**

I am certain that each speaker today will emphasize the great difficulty involved in the evaluation of any type of therapy used in multiple sclerosis. This difficulty involves, of course, the characteristic exacerbations and remissions seen in the disease. On the one hand, the possibility of remissions makes it exceedingly difficult to attribute improvement to the use of therapeutic method while on the other hand, the presence of exacerbations makes almost any type of treatment a disappointing and often heart-breaking task. This last statement, however, need not, and must not, mean that the patient should be abandoned. Although treatment of the condition by various forms of medication has been generally disappointing and unrewarding, work is being done to discover some effective medication and I am certain that Dr. Berlin's communication will have given you some idea of this work. I must admit that in my own hospital, The Jewish Chronic Disease Hospital, an attempt to use Isoniazide in older age patients has proved rather disappointing.

Generally speaking, the rehabilitation treatment of the multiple sclerotic will depend upon symptomatology presented. This, as you know, can be extremely varied. Multiple sclerosis is a disease characterized not only by its exacerbations and remissions but by the fact that it affects various portions of the spinal cord and brain. Symptomatology can be extremely varied, but there are a few types which are seen with extreme frequency. Ataxia due to cerebellar involvement, paraplegia, quadriplegia, extreme spasticity—these are probably the most frequent types of disability which the psychiatrist is called up to treat. The important overall principle of rehabilitation — that patients should be taught to live within the limits of their disabilities—holds good here as elsewhere. It must be insisted that the patient function as well as he can within the limits of his disability. Patients must not be placed in bed and abandoned. This, of course, is obvious and I am sorry to repeat it as a profound statement, but I do not think it can be repeated too often. Dr. Edward E. Gordon has written four excellent pamphlets which are published by the

Multiple Sclerosis Society. These describe home programs for patients in four categories; independently ambulatory, confined to wheelchair, ambulatory with aids and bed patients. Although these pamphlets are written for the use of the patients, they can be read with profit by all those having to do with the treatment of the multiple sclerotic. In these pamphlets are described various types of exercises using the sort of apparatus that can be found in the home. Activities of daily living and various methods are also described here together with various apparatus which can be used.

The adaptation of patients with strength loss to ambulation is a far easier task than that of adapting patients with ataxia. Unfortunately, ataxia is an extremely frequent concomitant of multiple sclerosis. When ataxia is due to loss of deep sensation patients can be retrained to ambulate using the eyes as a substitute for position-sense. Unfortunately, in cerebellar ataxia this method works very poorly. The patient can sometimes do better with glider canes giving a large bearing surface. Here, as elsewhere in multiple sclerosis, results are frequently disappointing since improvement in technique may be accompanied by the deterioration of the condition and real improvement is not apparent. However, this is not always so and gratifying improvements are frequently seen. If ambulation is no longer possible, the patient must be trained as a wheelchair patient and taught the activities of daily living which the paraplegic learns so easily. When the upper extremities are also involved additional problems, of course, are present. The possibility of ambulation, even with braces, becomes quite difficult. Fortunately, cases in which the lower extremities are much more involved than the uppers are infrequent. In these cases, the patients can be trained to use braces, to ambulate with crutches, to drive cars, etc., in the manner of the traumatic paraplegic.

Bowel and bladder involvement usually accompany loss of function in the lower extremities. The bladder dysfunction most frequently takes the form (at least in early cases) of urgency; the patient must urinate as soon as he feels the urge. He is therefore frequently embarrassed by accidents and the presence of these unfortunate incidents of urinary loss can easily lead a sensitive person into a homebound position. I therefore strongly urge that these patients be

*Presented at the Fall Conference in Physical Medicine and Rehabilitation sponsored by the Eastern States Chapter, Association for Physical and Mental Rehabilitation, November, 1955.

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provided with a leg urinal even when the incontinence appears to be minor. This frees the patient from the anxiety attendant upon the possibility of wetting himself, obviously a most embarrassing situation. I should also like to say a word about bowel control. The most frequent disturbance of bowel function is so-called constipation. This is similar to that seen in other neurological conditions, such as paraplegia, and is quite frequently treated with laxatives. I need not stress the fact that laxation would convert a dry patient to a patient who might become incontinent of feces. Bowel training should be established. This is accomplished by having a fixed time for bowel function (daily or every two or three days) and by the use of concomitant anal stimulation by the use of a gloved finger, a suppository, etc. Very frequently these are the only methods necessary. When, however, these fail, the use of enemas at regular intervals (three to four times weekly) becomes necessary. Again I cannot too strongly condemn the use of laxatives.

Besides the various disabilities caused by multiple sclerosis, a few of which have been mentioned above, one important symptom remains to be discussed. This is that of spasticity. Few multiple sclerotics are free of it in later stages and when present, spasticity is frequently the most distressing symptom which the patient has. I believe that this spasticity is more severe and more disabling than that of practically any other condition. Attempts at treatment of the spasticity by means of drug therapy have been extensive. Among the drugs which have been tried are quinine, neostigmin, curare, various forms of mephenesin, artane, etc. None of these have been a marked success. It is possible that curare in large, almost toxic, doses is the most effective. However, the use of curare apparently must be extended very close to the point where paralysis occurs. In these cases I would consider it unwise and, of course, dangerous to use the drug. Curare as a paralyzing agent has proved extremely useful in the hands of anesthetists who are prepared to administer artificial respiration in case of respiratory failure and indeed, frequently voluntarily induce respiratory paralysis, controlling it with artificial respiration. In this case, curare is obviously extremely effective in causing complete muscle relaxation. I do not think that this can be suggested as a means of treating spasticity, however. Various physical agents have been attempted in the relief of spasticity—exhausting exercise and exhausting electrical stimulation, for example. The results of these methods are always transitory and not very satisfactory.

The only really satisfactory treatment for spasticity remains surgical intervention. The section of motor nerves, of anterior roots, or even the removal

of a portion of the spinal cord is an eminently successful method of destroying spasticity. Unfortunately, this method, of course, destroys any remaining function and eliminates the possibility of any return of function in the future. This has proved a large stumbling block in the use of surgery for the relief of spasticity in multiple sclerosis. Obviously, it is extremely difficult to determine when a patient has arrived at the point where no remission can be expected. However, when a patient has little or no function in his lower extremities for a period of about a year and has extreme spasticity, I would consider the possibility of useful functional return as remote.

In addition, spasticity leads frequently to positions of extreme flexion contracture. These contractures in turn lead to enormous decubitus ulcers because of the constriction of arteries in these regions caused by the extreme flexion. In these cases, permanent contractures could be expected if the condition has remained for some time and spontaneous remission would be of little use to the patient. In addition, the patients become extremely ill from the effects of the decubitus ulcers and death from intercurrent infection can be expected. I should like to mention the history of two cases seen in the Bronx VA Hospital, cases which are undoubtedly familiar to many of you.

The first patient, E., was 33 years old when he was first admitted to the Bronx VA Hospital in 1951. Multiple sclerosis, mainly affecting the lower extremities, had its onset in 1945. Flexor spasms of the lower extremities started in 1950, a few months before his first admission. Marked flexion contractures were present at the time of admission, no decubitus ulcers were as yet present, but the patient was miserable because he could neither sit nor turn in a chair. No motor power of the lower extremities could be observed. Epidural blocks were attempted with little success. An obturator section was at first decided upon but even under complete anesthesia and curare, enough relaxations could not be obtained to surgically section the obturator nerves.

In June, 1951 an anterior rhizotomy, T11 to S1, bilateral, was done. Complete relaxation of muscles in the lower extremities followed; 40° flexion contracture at the knees remained. The patient was then treated on the PMR service where the contractures were reduced. Patient was then provided with braces, a wheelchair, and was discharged from the hospital almost two years after his first admission. He is now a comfortable patient as far as the flexion contractures and spasticity are concerned. He is capable of self-care and very different from the miserable patient he had been on admission.

The second patient, P., is still hospitalized in

the Bronx VAH. He was 58 years old at the time he was first admitted in December 1950. Onset of multiple sclerosis had been about 1939. Flexion contractures of lower extremities, due to spasticity had their onset a few months before his admission to the hospital. Attempts at overcoming the flexion contractures by manipulation were unsuccessful. Marked edema of the lower extremities, osteomyelitis of the right heel, large decubitus ulcers over sacral and coccygeal areas developed. Turning of the patient to allow healing of the ulcers was impossible because of the flexion contractures. An attempt was made to relieve the knee contractures by means of bilateral tenotomies; this procedure was unsuccessful and I might state parenthetically that this procedure almost always is unsuccessful. Finally in January 1952 an anterior rhizotomy, D12 to S5, was carried out. Complete stretching out of patient's lower extremities was pos-

sible very shortly after the operation and following this, plastic procedures were used to heal the decubitus ulcers present. At the present time, the patient's general condition is good and all the decubiti are absent except for one very small superficial ulcer. The patient is in a wheelchair, he is alive, his general condition is good and he is as comfortable as his general condition will allow. Unfortunately, there is severe involvement of his upper extremities which successfully prevents any attempts at ambulation. However, without the rhizotomy I am convinced that this patient would no longer be alive.

I believe that the history of these two patients amply illustrates the advisability of radical procedures for the severe spasticity found in multiple sclerosis. I believe that these two examples are perhaps among the most successful rehabilitation procedures carried out in the multiple sclerotic.

ALBANY PLAN ADOPTED BY VA

A new type of "total push" program in Veterans Administration hospitals is opening the doors of closed wards for many long-term mentally ill patients, VA announced today.

Successfully tested at the VA general medical and surgical hospital in Albany, N. Y., the program represents one of the first comprehensive attempts to recondition selected long-term psychiatric patients from closed ward status in neuropsychiatric hospitals to open ward status in general medical and surgical hospitals.

The patients generally selected for the treatment are those who have both mental and physical disabilities and who have shown little change in their mental condition after many years of treatment in neuropsychiatric (NP) hospitals.

The objective in transferring them to general medical and surgical (GM&S) hospitals is to provide more intensive treatment and rehabilitation for their physical disabilities and, at the same time, to apply "total push" measures in reconditioning them for greater freedom and independence in the hospital and community.

VA explained this not only frees beds in NP hospitals for those on the waiting list who need extensive psychiatric treatment, it also benefits the long-term mental patients with physical disabilities because of their transfer to a different type hospital where the major patient load is non-mental and where treatment primarily is oriented toward physical disabilities.

While the primary goal of the new "total push" program is to make long-term mental patients more suitable for GM&S hospitalization and thereby eliminate the need for lock-ward security, the Albany studies indicate some patients actually can be improved to the point of discharge to their families.

Albany reported the following results in three years of working with approximately 350 chronic schizophrenics, some of whom had been hospitalized in closed wards of NP hospitals for as long as 35 years:

1. All patients live in open wards in daily contact with non-mental patients.

2. Sixty have progressed to the point where they are

working regularly at jobs in the hospital; and,

3. Fourteen already have made trial visits home with 10 more slated for similar pre-discharge privileges—a remarkable accomplishment in itself in view of their long hospitalization, VA said.

The Albany approach resulted from an emergency transfer in 1952 of long-term patients from crowded NP hospitals in the east to GM&S hospitals in less crowded areas.

The transfer quickly enabled VA to care for large numbers of additional mental cases in vacated NP hospital beds and thereby relieved some of the pressure on its waiting list; but it also created many new problems at the GM&S hospital in Albany.

Despite these problems, Dr. Ian C. Funk, chief of psychiatry at Albany, and his chief clinical psychologist, Leo Shatin, Ph.D., decided from the beginning to prove both the "safety" and the potentialities for improvement of these older chronic patients.

They kept security measures at a minimum. Wards were opened where possible, and the patients used regular dining room facilities. Recreational areas and activities in the 11-floor building were made available to the mental patients.

Employees throughout the hospital came in frequent contact with almost all of the transferred mental patients. The patients also were permitted day-to-day contact with younger and non-mental patients.

Dr. Funk and his staff next evolved a program of group psychotherapy to supplement and expand the open ward type of treatment. In this program, Dr. Funk had the assistance of Dr. Leonard Rockmore staff psychiatrist, and Dr. Earl X. Freed staff psychologist.

Dr. Funk explained that "total push" through group therapies is not a new concept. He said such programs in VA mental hospitals have shown considerable success in inducing mental patients to resocialize and readjust themselves to others through the exploitation of mutual interests.

In Albany, however, the "total push" program was designed primarily to recondition long-term mental patients to an open ward status in a GM&S hospital and thereby permit freedom of the hospital and maximum rehabilitation.

VA said the success of the "total push" program at Albany is one of the bases for the current expansion to other GM&S hospitals capable of developing the program.

THE ROLE OF THE VOLUNTEER WORKER IN CORRECTIVE THERAPY*

CHARLES BADER**

Introduction

During the past six years, approximately thirty-seven female volunteer workers have assisted the corrective therapy section in the Neuropsychiatric and General Medical and Surgical Hospitals of this center to more effectively carry out its programs. Many of these volunteers have travelled from outlying communities and commuted distances up to eighty miles to serve. Of this group, fifteen volunteers have served faithfully for more than one year and at present ten volunteers are actively working with patients from one-half to a full day or more per week.

What are the prerequisites for a good volunteer worker?

1. That she be in good health both physically and mentally.
2. That she be willing and able to work with patients under the direct supervision of the corrective therapist.
3. That she possess sincere interest in the activity and psychological approaches to the patient.

What pre-training does a volunteer need?

A volunteer must have attended the Orientation and Indictoriation School for Volunteer Workers. Upon completion of this course, the volunteer is further oriented in corrective therapy techniques by a therapist. The latter consists of instruction in the application of skills to aid in the resocialization of the patient, activities essential to daily living, and learning to establish a favorable rapport between the patient and herself. It is most important that the worker help instill a feeling of self-respect and confidence and try to improve the patient's morale.

Procedures

All of our volunteers are assigned either to the corrective therapy clinic or ward program at the NP or GM&S Hospital. In many instances they have been used in both hospitals thereby making fuller use of their abilities and skills with various patient types.

The therapists' friendly and understanding approach toward the volunteer worker will do much to alleviate any doubts or fears which she may have con-

cerning the work to be done or the attitude or behavior of some of the patients.

In the Neuropsychiatric Hospital, the volunteer has a unique contribution to make. Under the direction of a corrective therapist she works with various types of patients; i.e. the schizophrenic, the manic-depressive or the blind. Some of these patients may be post-lobotomy or be receiving electric or insulin shock treatment. Initially, the volunteer is introduced to the patient by a corrective therapist and together they attempt to draw the patient out of his shell. Consequently part of her task is to be agreeable, understanding and encouraging. Conversation often lends itself to discussion of common interests, such as hobbies or places visited thereby offsetting the patient's preoccupation, fear or anxiety with a casual and friendly approach.

Frequently, a patient is better able to express himself during or after participating in a socializing activity such as modified bowling, badminton, horseshoes or golf. In these activities, the patient does a number of things. First, he responds to a proper sequence of skills and he gains confidence in his ability to perform tasks within his capabilities. His experiences gained from these activities are satisfying to him and give him a feeling of accomplishment. It is therefore essential that a volunteer help to stimulate the patient toward those activities that are so helpful to his "finding himself again." In some instances patients who have been prone to display indiscretions of speech, irritability and intemperate outbursts behave in a more socially appropriate way when Grey Ladies are present. A patient's emotional control may be improved out of respect for the volunteer assisting in the program as well as through the satisfying and interesting activities and experiences in which he is a part. The natural social environment and interaction of therapists and volunteer with the patient has an exhilarating effect on everyone in the clinic. Many individuals are aware of the kind, helpful and cheerful attitude of the volunteer and frequently ask about her and look forward to her visits.

An example is patient T.K. with a diagnosis of schizophrenia, unclassified, who has been ill over a period of four years. He was prescribed corrective therapy in September, 1949. His behaviour for the most part was characterized by marked preoccupation, depression, lack of environment awareness, psy-

*Presented at the Ninth Clinical and Scientific Conference, Association for Physical and Mental Rehabilitation, Boston, Mass., July 2, 1955.

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chomotor retardation, delayed and blocked speech. These reactions became less evident in the course of his daily corrective therapy treatment. At this time, it was felt that the volunteer could also aid the patient by giving him additional attention and assistance. The patient learned to socialize and derived much enjoyment from these contacts. At times, vast improvement was noted in his attitude and behavior. He would engage in activities in an alert manner, express himself clearly, and derive considerable satisfaction from social experiences. The patient finally went on leave of absence from the hospital which was extended to trial visit. This friendly daily relationship helps the patient to get along with other people and is a step forward in finding his place in society.

In the GM&S Hospital, the volunteer assists the corrective therapist in the treatment of the physically disabled. Many of the patients prescribed corrective therapy need supplemental assistance and individual attention since they are confined to their beds or wheelchairs the greater part of the day.

A few of the various types aided by the volunteer are: paraplegic, hemiplegic, amputee, and other patients chronically handicapped by disability. Some patients have lost the ability to communicate or have become withdrawn and so depressed that they shy away from people. Here the volunteer can be most helpful in aiding the patient to write his name, address, and even to help him write letters home. The volunteer can also assist the patient by encouraging him to talk and express himself; by having him read an inspirational message or something of interest. This can have an uplifting effect on a patient's morale and may help improve his speech or in making him more easily understood. Aiding the patient to improve his ability in performing necessary daily functions independently (such as picking up objects and using them adequately) is also a function of the volunteer. Thus the volunteer can be valuable in instilling the patient with the desire to help himself.

Example: Patient J. M. with diagnosis of hemiplegia with severe Parkinsonism had been a bed patient for over a year. The treatment aim was to encourage and teach activities of daily living and self-care on the ward. This patient lies on his back and is only able to move or change his position slightly in bed. He is emotionally unstable as he cries frequently perhaps feeling sorry for himself in his helpless condition. His speech is blocked, generally incoherent, and he has for the most part lost his ability to write. The corrective therapist has concentrated on assisting the patient to sit up, dress, move from bed to standing position, and ambulate with the aid of the walker increased distances depending

on his physical tolerance. The volunteer has aided the therapist in the following ways: First, she is able to spend considerable time encouraging and helping the patient to help himself; i.e. picking up pencil, comb, checkers, and using them properly; second, encouraging patient to roll and manipulate clay into various shapes. This has an effect of "limbering up" the patient's fingers and enables him to write with some degree of accuracy. Prior to this approach, the patient's writing was quite illegible. Third, the volunteer has helped the patient to express himself by reading and in general conversation. The patient has gained confidence in speaking, and has made himself more coherent. Fourth, she engages with patient in adapted activity such as quoits and checkers. This has also helped improve the functional ability of his hand and fingers and bolstered his morale considerably.

The use of adapted activities such as pitching rubber horseshoes, bean bag toss, quoits, etc., for bed and wheelchair patients can also aid in the functional improvement of the patient. These activities carried on by a volunteer produce a tonic effect and aid in stimulating the patient to motivate himself in other respects. The procedure may very well result in diminishing the depressing atmosphere of a ward filled with severely disabled patients.

Summary

In summing up the role of the volunteer in corrective therapy, it must be stated that through their effective use, the corrective therapist has been able to treat additional patients prescribed this therapy. This has also resulted in the more difficult patients receiving increased individual attention by the corrective therapist allowing a more intensive coverage of all patients treated. The medical staff has expressed appreciation for the sincere efforts of the volunteer and encouraged their use in corrective therapy.

The volunteer worker has been a dependable, loyal and satisfied worker. Trained in VA hospital procedures and oriented in corrective therapy techniques she has contributed much in supplemental assistance toward the improvement of the hospitalized veteran. Especially important is the fact that the volunteer serves as a bridge between the community and the hospital. To the patient she may represent even more of a link with outside life than do the regular personnel whom he identifies primarily with the hospital. Equally significant is the fact that as a result of her experience with patients the volunteer's perspective also becomes modified. Working directly with the patient she has come to realize that he is a person

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THE PHYSICAL FITNESS INDEX IN DIABETIC PATIENTS— A PRELIMINARY REPORT*

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MARK W. ULLMAN, M.Ed.‡‡

EMIL CHIORIAN, R.R.T. §§§

Introduction

This is a preliminary report of the study of an organized program of exercise and activity upon the Physical Fitness Index of thirty diabetic patients studied over a period of 18 months, (November, 1953 to June, 1955.)

It is generally agreed that insulin, diet, and exercise are the triad comprising a correct diabetic routine. It is also generally accepted that the best routine for diabetic regulation can be established while the patient is on an out-patient basis and thus the insulin and diet can be regulated to his daily vocational and avocational pursuits. However, it frequently happens that a patient is required to be hospitalized either because his regulation has broken down or for some special tests that are applied more readily on a hospital status. Here a new problem arises particularly in hospitals not equipped with physical medicine and rehabilitation namely, that the patient's diet and insulin, while thoroughly adjusted to his hospitalized status, may not at all be suitable for his demands of daily living. To compensate for the lack of sufficient activity in the hospital, the physician, therefore, prescribes less insulin after discharge.¹

On the other hand, some of the larger hospitals, such as Crile Veterans Administration Hospital in Cleveland have the facilities not only for exercise, but also for simulation in the hospital of the patient's post-hospital daily routine. These facilities are provided by two sections of the Physical Medicine and Rehabilitation Service, the exercise therapy department, called the corrective therapy section, and the manual arts therapy section which provides vocational and avocational pursuits of medical significance. At Crile Veterans Administration Hospital, for example, the manual arts therapy section provides

activities along the following lines: photography, plastics, woodworking, metal work, welding, watch repairing, and the usual phases of electronics, namely radio, television and electric appliance repair.

With the cooperation of the medical residents on the diabetic service, a routine has been established consisting of a referral to corrective therapy for exercise, and manual arts therapy for activity commensurate with the physical demands upon the patient following discharge.

The corrective therapy and manual arts therapy activities are, therefore, directed primarily at the regulation of the patient's diet and insulin requirements. But another question of interest has presented itself. What effect has the diabetic routine upon the patient's physical fitness? Because one of us (Mark Ullman) had previous experience with the Rogers Physical Fitness Test, this test was chosen for the purpose of this study.

The following items are required for the evaluation of the Rogers PFI: Age, height, weight, lung capacity (in cubic inches with a wet spirometer), grip strength as measured by a manuometer in pounds (right and left hand), back lift, leg lift, number of pull ups, and the number of push ups.

The ASI (Achieved Standard Index) equals the sum of the following: Lung capacity, grip strength (right and left), back lift, leg lift and arm strength. The arm strength is obtained by adding the pull-ups to the push-ups, multiplying this sum by one-tenth of the weight of the patient added to the height minus 60. This is compared with the NSI (Normal Standard Index) obtained from tables resulting from similar examinations of thousands of normal individuals and appearing in the Roger's Physical Fitness Index.²

The PFI is obtained by dividing the ASI by the NSI and multiplying by 100. The PFI norm established by Rogers for college students is 100.

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**Chief, Physical Medicine and Rehabilitation Service.

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‡‡Chief, Corrective Therapy

§§§Chief, Manual Arts Therapy

¹JOSLIN and ALIA, *Treatment of Diabetes Mellitus*: Philadelphia, Lea and Febiger, 1952, p. 285.

²ROGERS, F. R. quoted in CLARKE, H. H., *Application of Measurement to Health and Physical Education*, second edition, New York: Prentice-Hall, Inc., 1950.

Date Adm. and Disch. From PMRS	Age	Wt.	Ht.	Pull Ups	Push Ups	AS*	Leg Lift	Back Lift	Left Grip	Right Grip	Lung Cap. Ltrs.	Cu. In.	** ASI	*** NSI	**** PFI
1. 11-20-54	56	173	69"	1	4	135	185	262	145	150	92%	244	1121	2233	50
12-10-54	56	173	69"	2	8	270	200	275	170	200	94%	244	1359	50	
2. 8-16-55	60	157	67"	1	6	23	215	140	95	105	40%	106	484	1844	20
8-23-55	60	156	67"	3	5	184	225	150	115	110	47%	122	681	1844	36
3. 11-25-53	30	149	68"	0	11	253	125	140	145	155	116%	305	1123	2350	40
1-8-54	30	149	68"	1	19	460	140	165	160	185	116%	305	1226	50	
4. 12-8-53	21	173	68"	5	25	780	215	165	180	200	70%	183	1923	3122	60
1-15-54	21	173	68"	8	30	988	230	170	200	200	75%	197	1985	60	
5. 1-18-54	32	149	67"	0	0	22	65	65	105	200	75%	195	652	2273	20
2-20-54	32	149	67"	2	3	110	90	90	200	200	75%	195	885	30	
6. 1-19-54	28	138	69"	9	27	828	215	190	165	170	98%	262	1830	2220	80
2-5-54	28	145	69"	15	37	1248	225	195	200	200	109%	292	2360	2350	100
7. 1-8-54	36	154	69"	4	10	336	165	175	200	200	91%	244	1320	2274	60
2-8-54	36	154	69"	7	20	675	165	175	200	200	91%	244	1659	70	
8. 1-28-54	33	148	68"	0	2	46	115	115	85	125	65%	170	656	2235	20
2-19-54	33	148	68"	2	10	68	231	210	120	200	75%	201	1030	40	
9. 2-15-54	30	161	69"	4	18	361	190	165	145	170	109%	292	1323	2570	50
3-8-54	30	161	69"	7	25	832	220	180	180	200	109%	292	1704	60	
10. 2-26-54	33	200	68"	0	4	112	140	165	155	200	88%	231	957	3178	30
3-12-54	33	200	68"	3	10	364	200	185	200	200	90%	237	1399	40	
11. 2-26-54	37	179	69"	5	12	315	140	225	200	200	87%	231	1347	2700	40
4-8-54	37	179	69"	8	20	756	210	290	200	200	95%	250	1934	40	
12. 3-22-54	57	171	67"	1	1	41	100	110	150	160	75%	195	758	2255	30
4-30-54	57	172	67"	3	5	144	165	140	185	180	80%	207	1029	2155	40
13. 4-9-54	35	122	68"	2	10	164	110	115	125	165	116%	305	991	1770	50
5-10-54	35	125	68"	5	12	357	130	125	140	170	100%	262	1201	1717	60
14. 7-16-54	27	139	70"	8	13	504	190	165	125	140	81%	219	1364	2275	50
8-15-54	27	137	70"	10	16	624	190	190	140	130	76%	207	1507	2270	60
15. 8-25-54	32	132	71"	0	0	25	135	90	110	125	73%	201	686	2065	30
9-23-54	32	137	71"	3	3	150	135	115	170	135	80%	219	930	1971	40
16. 8-20-54	25	166	73"	5	5	300	255	200	110	200	65%	183	1256	2935	40
9-13-54	25	169	73"	8	10	510	260	210	150	200	70%	201	1549	2872	50
17. 8-25-54	24	181	73"	3	7	320	225	225	168	180	112%	317	1445	3220	40
9-13-54	24	184	73"	4	12	512	230	240	180	200	110%	311	1689	3218	50
18. 8-18-54	37	169	74"	0	2	62	115	115	135	150	92%	262	841	2525	30
9-21-54	37	174	74"	2	5	224	140	140	160	150	94%	268	1089	2613	40
19. 8-25-54	31	129	67"	3	10	260	180	165	130	125	78%	201	1074	1945	50
10-13-54	31	132	67"	7	11	378	200	170	160	180	80%	207	1313	2003	60
20. 10-6-54	46	195	68"	0	0	28	25	90	180	200	70%	183	706	2805	20
12-8-54	46	185	68"	1	2	87	35	110	200	200	78%	201	836	2630	30
21. 10-28-54	30	160	70"	4	20	624	180	165	180	200	99%	268	1641	2553	60
11-23-54	30	163	70"	6	25	806	200	175	200	200	99%	268	1880	2610	70
22. 10-28-54	32	222	69"	0	9	288	363	190	170	185	78%	207	1412	3609	30
11-17-54	32	211	69"	0	12	360	450	200	198	185	87%	231	1636	3415	40
23. 11-5-54	25	161	73"	7	5	360	127½	215	190	200	65%	183	1288	2770	40
12-22-54	25	158	73"	10	10	580	140	230	200	200	75%	213	1583	2714	50
24. 11-29-54	59	146	64"	2	9	209	140	105	70	55	49%	122	712	1669	40
12-10-54	59	146	64"	3	10	247	150	115	90	70	54%	134	819	40	
25. 12-9-54	34	128	72"	3½	8½	288	115	115	105	96	84%	237	999	1848	50
2-9-55	34	134	72"	8	5	338	140	140	145	180	92%	256	1212	1957	50
26. 1-17-55	35	114	69"	0	2	31	70	65	65	85	32%	85	433	1573	20
2-18-55	35	120	69"	1	4	105	100	90	150	110	48%	128	688	1681	40
27. 1-19-55	22	149	67"	2	12	308	140	140	95	150	72%	201	1048	2623	30
3-15-55	22	153	67"	2	15	391	165	190	180	205	80%	207	1355	2700	50
28. 3-14-55	33	130	69"	4	13	374	140	140	115	125	73%	195	1106	1909	50
4-5-55	33	136	69"	5	16	483	150	148	150	140	78%	207	1299	2018	60
29. 5-10-55	22	155	67"	2	13	345	190	190	154	178	80%	213	1340	2720	40
6-1-55	22	154	67"	4	16	460	165	190	190	200	80%	198	1403	2720	50
30. 6-7-55	44	140	69"	0	1	23	215	90	120	140	65%	176	756	1861	40
6-17-55	44	144	69"	0	1	24	225	90	85	115	73%	198	737	1856	40

* Arm Strength

** Achieved Standard Index

*** Normal Standard Index

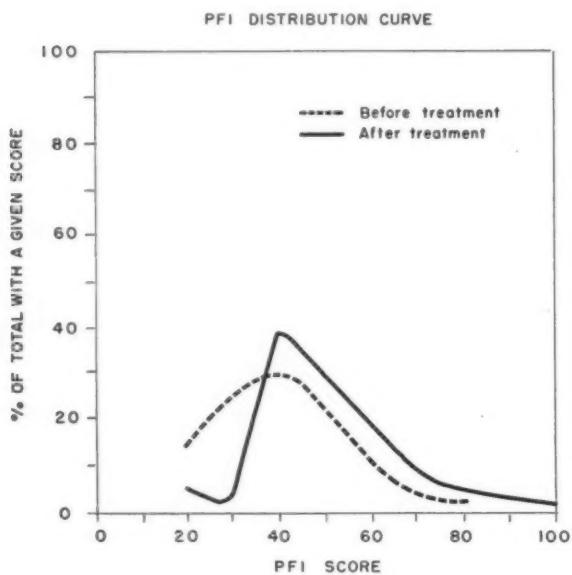
**** Physical Fitness Index

THE PHYSICAL FITNESS INDEX IN DIABETIC PATIENTS

Method of Study

Thirty patients referred from the diabetic wards were assigned to corrective therapy for the diabetic routine.

The routine includes the complete PFI Test the first day and then exercise twice daily consisting of the following: wall pulleys, bicycle, rowing machine and medicine ball throwing.



The Physical Fitness Index in Diabetes

Thirty diabetic patients referred to the PMR Service were examined in corrective therapy as to their PFI with the following results:

1. At the beginning of the exercise and activity program, 20 or 66 2/3% had a PFI of 50 or less, and only 10 or 33 1/3% had a PFI of over 50.
2. At the end of the activity program, i.e., just prior to discharge, 12 or 40% had a PFI of 50 or less while 18 or 60% had a PFI of over 50.

Average PFI

The PFI at the beginning of treatment ranged from 25 to 82 with an average score of 44 and a median score of 45.

The PFI at the end of treatment prior to discharge ranged from 31 to 100, with an average score of 52.5 and a median of 51.5. Thus there was a general overall improvement in the PFI scores of 19%. Duration of hospitalization varied from 7 to 63 days; average stay was 33 days.

Summary and Conclusions

Assuming the Rogers PFI is a true reflexion of the individual's physical fitness, we must conclude from this preliminary study:

1. The PFI of diabetic patients during breakdown is less than the norms established by Rogers.
2. Regular exercise and activity associated with correct diet and insulin appears to raise the PFI of these patients.

Proposed Method For Further Study

1. Establish control groups to segregate the exercise factor.
2. Continue the study by providing a more adequate sampling.

NEW DRUGS — Cont'd From Page 5

Again, insofar as we have depended on stimulant drugs, we have tended to avoid interpersonal problems and have taken the easy way out.

We are on the threshold of a great new surge of interest in drug treatment of mental illness. The facilities of large pharmaceutical houses are geared to find better compounds. Cures or near cures are being reported. If events follow their natural course, event-

ually there will be a period of judicious study and understanding of their value, and we may anticipate that the true worth of these new medications will be established in the very near future. These drugs can help bring more patients within the therapeutic orbit so they can appreciate the warmth and understanding of personnel and participate actively in the therapeutic milieu. They will facilitate, add to and enrich the development of a truly therapeutic community.

VOLUNTEER — Cont'd From Page 13

with feelings and desires like most of us and he appreciates any attention and kindness shown him. As a member of a social, civic or religious group in the community, the volunteer is able to help dispel erroneous ideas in the community concerning psychiatric patients and help to modify attitudes toward patients who have been discharged from mental hospitals. This helps to make the transition from hospital to community less of a shock to the veteran and the community is likely to accept him more easily.

"From
Other
Journals"

WILLIAM BEAUMONT, "Advances in Physical Medicine," *The Practitioner* 175:471-478, October, 1955.

There is little that is new in exercise techniques; the advance lies in adapting basic principles of movements to meet the requirements of the modern concept of pathological and biological states. The preoperative use of exercise is a post-war innovation and is designed (1) to bring about maximum respiratory function in order to ensure smooth and easy anaesthesia and (2) to 'tone up' muscles and loosen the joints of limbs and back while confined to bed. Postoperative procedure is to resume at the earliest moment both breathing and postural exercises. In this way respiratory complications are reduced to a minimum and backache and stiff joints are not allowed to develop. Antenatal exercises to increase muscle tone and control and instruction in muscle relaxation are widely used in pregnancy. Postnatal exercises are directed towards the prevention of postural defects, backache and permanently relaxed abdominal muscles. Assisted movement is started in the earliest stages of hemiplegia. After the first week neuromuscular stimulation may be given as an introduction to re-educational exercises. Muscle relaxation in psychiatry is based on two hypotheses: (1) In a state of stillness with general relaxation of the musculature, no emotion can be felt; (2) Such a state of relaxation can be produced by systematic teaching.

PJR

HOWARD A. RUSK, "Rehabilitation of the Hemiplegic Patient," *International Forum*, 3:283-286, November, 1955.

The objectives of a program of rehabilitation for the hemiplegic patient are (1) to prevent deformities, (2) to treat deformities if they occur, (3) to retrain the patient in ambulation and elevation activities, (4) to teach the patient to perform the activities of daily living and to work with the unaffected arm and hand, (5) to restrain the affected arm and hand to its maximum capacity, and (6) to treat facial paralysis and speech disability if present. It is essential to teach the patient to care for his daily needs with his unaffected arm. There is no specific medical therapy for aphasia. Most hemiplegic patients can be trained so that they achieve lives of self-sufficiency and usefulness.

PJR

ABRAHAM FLEXNER, "The Usefulness of Useless Knowledge," *Journal of Chronic Diseases*, 2:241-246, September, 1955.

Life has never been logical. It is irrational that the ceaseless quest for the useless results is conferring great practical boons upon mankind, but those who are today making the largest contribution to human happiness and health are the quiet workers in laboratories and libraries who do not ask themselves, "what is the use?" Most of the really great discoveries which benefit mankind are made by persons driven by a desire to satisfy their curiosity. The spirit and policy of research must be the fearless and unhampered search for truth, the unlimited cultivation of the natural curiosity of human beings within the field of science. No one can foretell or plan the outcome of the untrammelled roving of the human spirit. Whether the practical results will be good or evil depends upon civilization.

PJR

ALEX W. BOONE, EARL HALTIWANGER and ROBERT L. CHAMBERS, "Football Hematuria," *Journal of the American Medical Association*, 158:1516-1517, August 27, 1955.

This study was made to obtain data on the incidence and significance of hematuria in strenuous exercise. A total of 874 urine specimens were collected from 58 college football players. Each man's urine was normal when he reported for training but every player developed microscopic hematuria during the season. Microscopic bleeding may accompany preseason conditioning exercises. The incidence of hematuria increased with body contact drills. A peak incidence occurred after each game. Both gross and microscopic bleeding cleared promptly with rest. When a single episode of gross hematuria subsided within 24 to 72 hours, there seemed to be no harm in the resumption of full activity.

PJR

NORMAN JOLLIFFE, "Recent Advance in Nutrition of Public Health Significance," *Metabolism*, IV:191-203, May, 1955.

Four recent developments offer great potentialities for improving the health of people. 1. The chief dietary defect in the U.S. is our inordinate consumption of empty calories. Empty calories, principally sugar and cooking fats, are for practical purposes pure chemicals and do not contribute their share of nutrients in proportion to their energy contribution. 2. There is a possibility of fortifying certain of our basic cereal grains with amino acid to extend materially the world's supply of high grade protein. 3. Animal protein foods contain vitamin B₁₂, a factor not shared by vegetable proteins. Addition of B₁₂ to diets low in animal protein may be helpful in cases of "simple growth failure" in children. 4. From work on animals there is reason to believe that certain antibiotics have growth promoting effects.

PJR

DAVID SELMAN and CLIFFORD GUALANO, "Effects of Football Playing on the Composition of the Urine," *New York State Journal of Medicine*, 55:3120-3122, November 1, 1955.

Urine was collected from high school football players immediately before and after games. Postgame urines tended to be acid, turbid and to have an increased specific gravity. Of the players, 92% developed proteinuria, which follows vigorous exercise, and 81% exhibited hyaline and/or granular casts. This study does not indicate that football playing is likely to be any more injurious to the kidneys than other comparable exercise which does not involve body contact.

PJR

J WILLIAM T. BURNS, "Medical Problems of Skin Diving," *Journal of the American Medical Association*, 159:5-7, September 3, 1955.

Since World War II "skin diving" has become an increasingly popular sport. Diving accidents are becoming more commonplace and it is essential for physicians to become acquainted in a general way with the problems of a diver's environment. The law of partial pressure states that within a mixture of gases, each gas exerts a partial pressure independent of all other gases in the mixture. If sufficient nitrogen dissolves in tissues, on rapid ascent the gas evolves from the tissues faster than the blood stream can carry it away. Bubbles can form to block capillary blood flow, producing symptoms of anoxia to the tissue supplied by the capillaries. This is the etiological factor in caisson disease or "the bends." Oxygen lack deadens the faculties and loss of consciousness may occur before a person realizes what has happened. Under pressure nitrogen has a narcotizing effect similar to the euphoria occurring with alcoholic intoxication. Nitrogen dissolves in fatty tissues to a marked degree, causing the obese individual to be more susceptible to caisson disease. Accumulation of excess carbon dioxide in the helmet causes panting, fatigue, headache, dizziness, nausea and loss of consciousness. Perfect health is mandatory for the skin diver. The ideal type is young, slender, composed and with good vision. Any type of chronic illness or nervous tendencies may prove disastrous. Cigarettes, alcohol, excessive intestinal gas, constipation or head colds are detrimental to diving.

PJR

RICHARD M. SUTTON, "Two Notes on the Physics of Walking," *American Journal of Physics*, 32:490-491, November, 1955.

In walking at the rate of 120 three-foot steps per minute, one advances at the rate of 4.1 m.p.h. Each foot is at rest on the ground for one-half second, then moves forward 6 ft., and comes to rest again in the next $\frac{1}{2}$ sec. The maximum speed of the moving foot as it passes the stationary foot is about 12.8 m.p.h. The maximum acceleration is approximately 3.7 g. When a person balances on one foot, the force of compression in the tibia is 3 or 4 times the body weight, and the tension in the Achilles tendon is 2 or 3 times the weight.

PJR

H. HARRISON CLARKE, "Physical Fitness," Saskatchewan Recreation, 1-3, Fall, 1955.

The physician is concerned with deficiencies likely to impair organic functions and to cause death. The physical educator develops a body that is strong and capable of prolonged effort. Physical fitness is "The development and maintenance of a sound physique and of soundly functioning organs, to the end that the individual realizes to an optimum measure his capacity for physical activity, as well as for mental accomplishments, unhampered by organic drains or physical defects or by a body lacking in physical strength and vitality." Physical educators have a special responsibility to those who are sub-par in this essential quality. Properly directed exercise is the only means for acquiring the ability to engage in sustained effort. Physical fitness is related to mental accomplishment and to social adjustment. To improve the physical fitness of youth the focal point of the attack must be on the low fitness group.

PJR

"Vitamins and Iron for Athletes," *Journal of the American Medical Association*, 159:735, October 15, 1955.

The Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association in March 1955 adopted a resolution recommending that the use of oxygen in athletic competition be disapproved. The administration of drugs to stimulate athletes or to narcotize an injured part or mass medicine such as the administration of vitamins and other products constitute poor medicine, worse education and unfortunate ethical practice.

PJR

C. R. LOWE and J. R. GIBSON, "Changes in Body Weight Associated with Age and Marital Status," *Journal*, 4946:1006-1008, October 22, 1955.

Surprisingly little is known about the sources of variation in weight of healthy people. Weight is related to height and increases in age. There is some evidence of variations with region, season, occupation and social class. A study of 16,000 factory workers in England showed that between the ages of 20 and 49, women's mean weight increased about 3 pounds every five years. In each age group married women were heavier than single women and those with children were a little heavier than those without them. The mean weight of males varied very little with age, but height decreased with age.

PJR

J. T. H. JOHNSON and HENRY O. KENDALL, "Isolated Paralysis of the Serratus Anterior Muscle," *The Journal of Bone and Joint Surgery*, 37-A:567-574, June, 1955.

Paralysis of the serratus anterior may come on following a hard blow or after a chronic strain of the neck and shoulder region. Usually there is first an aching localized in the region of the scaleni. The pain may radiate down the arm or toward the scapular area. A day or two later inability to raise the arm properly and winging of the scapula follows. A fully developed case is usually accompanied by inability to abduct the arm beyond 90 degrees. During attempts to do push-up exercises the winging becomes very marked. Generally the shoulder is displaced forward and drops to some extent. There is frequently secondary weakness of some antagonist muscles, particularly the inferior portion of the trapezius, often accompanied by a tightness, sometimes painful, of certain antagonist muscles such as the rhomboids and pectoralis minor. Treatment requires bracing and exercise.

PJR

V. W. RAPP, "Physical Medicine and the Rehabilitation of a Geriatric Ward," *Journal of the American Geriatrics Society*, III:463-466, July, 1955.

The physical and mental processes in the aged include:

1. Gradual tissue desiccation.
2. Retardation of cell division, capacity for cell growth and tissue repair.
3. Retardation in the rate of tissue oxidation.
4. Cellular atrophy and degeneration; increased cell pigmentation and fatty infiltration.
5. Decreased speed, strength and endurance of skeletal neuromuscular reactions.
6. Decreased strength of the skeletal muscles.
7. Progressive degeneration and atrophy of the CNS, impaired vision, hearing, attention, memory and mental endurance.

In an on-the-ward activity program in a V.A. Hospital an occupational therapist was assigned to build a patient's confidence to the point where he would accept psychotherapy. A corrective therapist taught the activities of daily living, ambulation, reconditioning and personal hygiene. Calisthenics were found to be too strenuous and the job principally became one of finding work activities within the ward.

PJR

PAULINE BEERY MACK, MALOISE STURDEVANT DIXON, et al., "A Study of the Relation Between Ingestion of Frozen Orange Juice and Resistance to Fatigue," *American Fractitioner*, 6:584-589, April, 1955.

A survey of the opinions of approximately 500 subjects showed that their major reason for drinking between meals beverages was that such beverages were believed to afford fatigue resistance. Tests were made with 124 children, using a manometer test, two endurance tests, a pulse-ratio test and a speed-accuracy test. On the average, the change in response of the respective test after the ingestion of orange juice exceeded that following the control beverage. Collateral trials indicated that the favorable results with orange juice were related chiefly to its sugar content.

PJR

News and Comments

VA INITIATES WORK ADJUSTMENT PROGRAM

Hundreds of severely disabled veterans who might still be "on the sidelines" have gained a new start toward independent living through a Veterans Administration program of "work adjustment training."

The program, tailored to fit the needs of each veteran, is designed to help him master the fundamentals of day-to-day living and working—things that the able-bodied take for granted, but that seem like almost insurmountable obstacles to the seriously handicapped. It is not designed to train him thoroughly for a specific job; that can come later, VA said.

Most "work adjustment training" has been provided for disabled veterans in sheltered workshops and rehabilitation centers, where they can receive the sympathetic and understanding attention so necessary in their first steps of adjustment to the work-a-day world. A few vocational schools also offer this training.

The program has four goals, VA said, all related to the end of restoring the veteran to a useful life:

It helps him acquire fundamental work capacities—such as training a double arm amputee to manipulate his hooks in handling papers for a filing job.

It helps him gain personal confidence that he is able to work. In some instances, severe handicaps tend to create a "what's the use?" attitude. This attitude has to be conquered before the trainees can go on to other things, VA said.

It helps him adjust to work activities and to his associates on the job—to feel that, despite his handicaps, he "belongs;" he is a part of his place of work, rather than apart from it.

And it helps him develop fitness for a regular program of vocational training that can follow or, if that is not needed, for employment.

Through "work adjustment training," severely disabled veterans already have prepared for jobs as draftsmen, office workers, restaurant workers, leatherworkers, woodworkers, radio repairmen, printers, bookbinders and many more.

From its files, VA described the case of a seriously disabled Korean combat veteran rehabilitated through "work adjustment training." In 1950, during the worst of the fighting in Korea, this New England veteran was injured in the head by shrapnel.

As a result, he developed epilepsy, lost the vision of one eye and practically lost the use of his right arm. His multiple disabilities were almost too much for him to cope with. He tended to withdraw from society, and live a life alone. He spent most of his time at the movies, he said later, where he could relax in the protective darkness of the theater, confident that at least there, "unfriendly" people weren't staring at him. Finally, in the fall of 1952, he applied to VA for Public Law 894 training—a law providing vocational rehabilitation training for disabled Korea veterans.

VA counselors recognized that the veteran was by no means ready for a regular course of training, even though he did have an aptitude for clerical work. But they did recommend "work adjustment training," to help him learn to adjust to the basic elements of holding a job.

He enrolled for six months in a sheltered workshop, where the emphasis was placed on increasing his ability to socialize; on gaining clerical practice, and on learning to perform his duties with his good left hand.

According to VA progress reports, here's what happened to him:

November, 1952 (when he began training): "At first he was ill at ease, unhappy, generally confused—awkward, sensitive, but very cooperative. He did not take too well to typing, so this was replaced by work on electric calculating machines, mimeographing, filing, keeping production and shipping records."

May, 1953: "It was a wonderful experience to see him take hold and really find himself. Now he is sure he can do certain types of work, particularly that involving figures.

He also can write with his left hand. All of his co-workers like him very much."

June, 1953: "When he returned to VA for revaluation, he was much changed. He was able to socialize, had gained some modest ambitions and generally was optimistic about his future . . . The neuropsychiatric consultant stated that the veteran had surpassed his expectations."

June, 1953: "With VA's help, he enrolled in a 12-month intensive clerical course in a secretarial school, under Public Law 894."

October, 1953: "At the end of his fourth month at school, the veteran found satisfactory employment as a messenger and mail clerk with the Government, where he still is employed. He is well-liked by his supervisor and fellow-employees. He is cooperative, able to do his work well (although he is spared heavy carrying). His absences have been minimal, mostly occasioned by visits for VA outpatient treatment. He has had one seizure since he began working, and this was well handled by supervisory and health personnel. The agency plans to continue him as a permanent worker."

NEW REHAB COURSE AT NYU

A new course entitled "Physical Deconditioning and Reconditioning" has been added to the curriculum of the Department of Physical Education, Health and Recreation at the New York University School of Education. The course consists of 30 hours of instruction in principles of physiology, sociology, and psychology applied to problems of exercise and inactivity. The 3-point course is offered to rehabilitation students and to teachers of the physically handicapped and is under the direction of Dr. Raymond A. Weiss.

CHOLESTEROL STUDIES LINK EXERCISE WITH PREVENTION OF CORONARY OCCLUSION

A group of researchers from the University of Minnesota have recently linked physical activity with the maintenance of cholesterol levels. Reporting in *Science*, the researchers reported that they found that cholesterol levels were lower when taken under fasting conditions and raised a few hours after breakfast, in sedentary persons. Since cholesterol is a primary chemical in the formation of lesions which damage the heart, brain and blood vessels, its presence at a high level in the blood has led many medical scientists to the assumption that it is indicative of a susceptibility to occlusion of the vessels. Following their initial findings, the Minnesota group discovered that cholesterol levels were not raised a few hours after breakfast in active subjects, a fact which suggests the mechanism for the connection between coronary attacks and activity which was first discovered by British researchers.

PSYCHOLOGICAL TEST HELPS TB PATIENTS ACCEPT TREATMENT

A simple form with 80 incomplete sentences is helping Veterans Administration combat one of the most serious problems in tuberculosis hospitals—TB patients leaving the hospitals against medical advice before their treatment is complete.

VA said the simple form—known as the Madison Sentence Completion Form—was developed by George Calden, Ph.D., clinical psychologist at the VA hospital in Madison, Wis.

In the three years the form has been used at Madison in combination with other techniques, the percentage of patients who left before treatment was completed dropped from 50 to 33 percent.

Irregular discharge is the term applied to the departure of such patients. VA said its experience with the irregular discharge problem parallels that of non-VA hospitals.

At Madison, the 80 incomplete sentences are answered by patients early in their hospitalization. Dr. Calden said the information obtained from the answers indicates irregular discharge "risks." An integrated hospital staff approach to these "risks" then is instituted to help the patients with their problems and thereby prevent their leaving the hospital against medical advice, if possible.

Patients are given the form during their eighth week of hospitalization and are told to write whatever answers they wish. Their answers permit an evaluation of their attitudes and emotional reactions to (1) bed rest, (2) hospitalization, (3) tuberculosis, (4) ward life, (5) the medical staff, (6) irregular discharge, (7) family problems, (8) medical treatment, and (9) attitudes of a general nature.

VA said when the analysis of a completed form indicates a patient may have irregular discharge tendencies, specific hospital staff and services are utilized to alleviate the problem that may eventually cause the patient to leave before his treatment is completed.

For example, VA said, it may be detected the patient has such strong doubts about his ability to work and support his family after hospitalization that this fear may seriously interfere with medical treatment or lead to irregular discharge.

For this patient, VA counseling psychologists on the hospital staff, through use of vocational tests and early interview can reassure him of his employability and identify the special interests, skills, and aptitudes which he may have. The staff then can arrange with rehabilitation workers for exploratory work experience prior to the discharge of the patient from the hospital.

VA said irregular discharge is a serious problem because studies indicate that in comparison with regularly discharged patients, sustained good health is half as likely and death twice as likely as among patients who leave the hospital prematurely.

Financial costs can be calculated only approximately. VA estimates that each irregular discharge represents an investment of \$10,000 in treatment which largely has been lost.

The Madison Sentence Completion Form is being used with rewarding results in more than 35 VA and non-VA tuberculosis hospitals and sanatoria.

The form also is being used by clinical psychologists as a research tool in investigating the psychological aspects of tuberculosis.

VA said hospital administrators and staff physicians are recognizing its value as a way of conducting "public opinion polls" to ascertain patient's attitudes toward hospital meals, recreational facilities, medical treatment programs and administrative policies. The patient's responses often include positive suggestions for improving their morale and for bettering their hospital stay.

In this manner VA said, an understanding of "what's in a patient's head" combines with a knowledge of "what's in a patient's chest" to assure a more comfortable hospitalization and increase the likelihood of his being regularly discharged after complete treatment.

PSYCHOLOGICAL TESTS HELP DIAGNOSE EPILEPSY

A new aid in the diagnosis of epilepsy has been developed at the Veterans Administration hospital in Salt Lake City, Utah.

Psychological tests, used in new ways, have proved to be sensitive and surprisingly accurate indicators of brief but noticeable thought disturbances which characterize epilepsy, VA said. Dr. H. B. Hovey, clinical psychologist, and Dr. Kenneth A. Kooi, director of the electroencephalography laboratory, at the Salt Lake VA Hospital have reported their use of the psychological tests, and the results obtained, in the September, 1955, issue of the *Archives of Neurology and Psychiatry*, published by the American Medical Association.

They said when epileptic patients, who frequently are highly intelligent, are working on difficult mental tasks, they occasionally "slip a cog" or have a brief mental black-out. For just a moment, they forget what the task is they are working on. Then, they are right back in proper gear. But, during such lapses, which may be for only a fraction of a second, they will give answers to psychological test questions which show they temporarily lost their train of thought.

For their study, Dr. Hovey and Dr. Kooi selected 169 patients, who were divided into three groups of comparatively equal size: (1) those having a definite diagnosis of epilepsy; (2) those without epilepsy, but suffering an organic brain damage; and, (3) psychiatric, or mentally ill, patients without any trace of epilepsy.

The investigators observed the psychological test responses of these patients, and checked the results against electroencephalograms or brain-wave readings, which are of major importance in the diagnosis of epilepsy. One part of the test considered of a picture-completion exercise. Pictures of all types of objects had some part missing, such as the handle off a cup, a knob off a door, or a second hand off a watch. The researchers' study disclosed that an epileptic patient may be going along rapidly, spotting the missing part in picture after picture, and answering as expected. When shown the next picture, he may say "What was it you wanted to know?", showing he has momentarily lost track of the problem. Or, instead of spotting the missing hand from the watch, he may answer, "It's one-fifteen." These errors are particularly revealing in an epileptic patient. Dr. Hovey and Dr. Kooi point out, inasmuch as the epileptic patient will usually recover his train of thought immediately and finish answering the questions as expected. Usually, other patients, even those with organic brain damage, or the mentally ill do not make this type of error, the investigators explained.

Results of the study by Dr. Hovey and Dr. Kooi reveal that 44 percent of the epileptic patients tested showed definite evidence of this mental black-out; that only 17 percent of those with organic brain damage, and only 9 percent of the mental patients "slipped a cog," or momentarily lost their train of thought during the picture test.

SURVEY SHOWS EMPLOYABILITY OF REHABILITATED CARDIACS

Ninety-five out of every 100 veterans with heart and circulatory ailments, rehabilitated through Public Law 16 training, are working today as productive wage-earning citizens, a Veterans Administration survey disclosed.

Only a few doors to employment have been barred to these veterans because of their disabilities, VA said. They can be found in farms and factories, offices and laboratories—virtually everywhere in America. Eighty-six percent of the employed veterans are using skills they acquired in training, and 98 percent like the kind of work they are doing, the survey showed. Of the veterans not working, half said they were unemployed for reasons not related to their heart or circulatory disabilities.

VA's follow-up study was made to find out what happened to disabled veterans after they finished or stopped Public Law 16 training and started making their own way in life. It covered a representative sampling of the 600,000 disabled World War II veterans who received vocational rehabilitation training under Public Law 16. About 40,000 of the veterans suffered from heart and circulatory disabilities.

The work record of veterans with heart and circulatory conditions has paralleled the record of veterans with other disabilities who were rehabilitated through Public Law 16 training, VA said. The proportion holding jobs was about the same for both groups—around 95 percent. Again, in both groups, nine out of 10 of the employed veterans were working full-time. The tenth was on the job part-time. The average weekly income was nearly the same for both groups—more than \$70 a week.

Veterans with heart and circulatory ailments changed jobs at a slightly higher rate than did veterans with other disabilities. According to the VA survey, 27 out of 100 of the heart and circulatory group changed jobs once, compared with 22 out of 100 of the rest of the disabled.

Once a veteran in either category made his one change of employment, he was likely to "stay put," VA said. The proportion of veterans in both groups who changed more than once was low.

Examining the job objectives of disabled trainees the VA follow-up study found that veterans with heart and circulatory disabilities aimed for top-level professional and managerial occupations at a higher rate than veterans with other disabilities or 42 percent compared with 38 percent. On the other hand, those with heart and circulatory ailments tended to veer away somewhat from occupations requiring a great deal of physical activity. Nine percent went into farming, for example, compared with 12 percent of the others.

The VA survey disclosed a number of other facts about rehabilitated veteran-trainees with heart and circulatory disabilities: At the time they entered training, their ages ranged from under 20 to over 45. Two-thirds, however, were

between 20 and 30, and another 25 percent were between 30 and 40. Eighteen percent had had some college training before enrolling for their Public Law 16 studies. Another 62 percent had only a high school education. The rest had not progressed beyond grade school. Nearly three-fourths of the veterans were supporting families while they trained under Public Law 16.

PARALYZED VETERAN BECOMES MEDICAL EDITOR

A paralyzed Korea veteran from Chicago, one of the nation's first two journalism school graduates to specialize in medical writing, has just started working for the American Medical Association as an editor of its specialty journals.

The veteran, Charles F. Chapman, was paralyzed from the waist down in a jeep accident in 1951, which occurred while he was training to be a combat jet pilot.

While undergoing treatment at the Veterans Administration hospital in Hines, Ill., Chapman received vocational counseling which indicated that he had a definite aptitude for technical writing.

After he left the hospital, he enrolled at the University of Illinois under Public Law 894, a law providing vocational rehabilitation training to disabled Korean veterans who need it to overcome their handicaps.

At school, Chapman participated in wheelchair sports and also edited a number of student publications.

The paralyzed veteran, 26 years old and married, recently received the Harold Scharper Service award for outstanding achievement, presented by Delta Sigma Omicron, disabled students organization.

PNEUMATIC PROSTHESIS DEVELOPED FOR ARM AMPUTEES

Professor Siegmund Weil and Technician Otto Hafner of Heidelberg University, after seven years of research, have succeeded in developing a pneumatic prosthesis for arm amputees. The device is powered by a small chamber containing carbon dioxide under pressure and is activated when the muscles over which the chamber is placed are moved slightly. This slight motion is enough to open a system of tiny valves which cause the gas to escape from the chamber and activate small air bellows that move part of the limb. The gas is then dissipated through a special exhaust.

On tests of fifty patients, the device aided amputees in performing up to twelve different movements. The patients were able to eat and drink with normal utensils, grasp objects with varying degrees of force and some can use a typewriter or hold a pen. The device retails from \$357 to \$600 which includes a three week training course in its use. The chief disadvantage of the device thus far has been the fact that the carbon dioxide has to be replenished frequently.

THE SEVENTH WORLD CONGRESS OF THE ISWC

The Seventh World Congress of the International Society for the Welfare of Cripples will be held in London the week of July 22-27, 1957, it was announced by Donald V. Wilson, Secretary General of the ISWC. Held each third year, this conference brings together from every corner of the world doctors, social workers, surgeons, therapists, employment counselors, psychiatrists, artificial limb experts and others interested in services for the physically handicapped.

The International Society is advancing the rehabilitation of the world's crippled through its work with voluntary member organizations in fifty countries. Its global program is striving to bring about and stimulate total help for the handicapped child or adult by means of a worldwide exchange of students and experts, publications and professional knowledge; the specialized research of expert committees; regular world conferences; and by coordinating its aims with other organizations concerned with the general problem of disablement.

RESEARCH COMMITTEE ANNOUNCEMENT

The committee is still in the formative stage with fifteen individuals, specialists in various fields of rehabilitation, having been contacted regarding service. As soon as definite assignments are made you will be notified through the *Journal* so that each person interested in or actually conducting research may have a source of reference concerning any aspect of research.

In the interim all correspondence concerning research should be addressed to Paul B. Bell, Chairman, 1143 Getwell, Memphis, Tenn.

POSITION VACANCIES

The new Sepulveda (Calif.) VA Hospital is in the process of activation. The hospital has a 1,000-bed capacity combining facilities for both NP and GM&S patients. It is located in the City of Los Angeles in the San Fernando Valley centrally located between mountains, ocean and desert. Both houses and apartments are available and the area is admirably suited for raising a family. A number of corrective therapy positions at the GS-7 level are anticipated and interested persons are urged to contact Joseph N. Tosches, Chief, Corrective Therapy, VA Hospital, Sepulveda, Calif.

Book Reviews

"Normal and Elementary Physical Diagnosis," by Whitelaw Reid Morrison and Laurence B. Chenoweth. Fifth Edition. (Philadelphia: Lea & Febiger, 1955. 412 pp. \$5.50.)

By the time a text reaches its Fifth Edition it should be safe to assume that there is a need for such a book and that the one in question has met general acceptance. So far as the reviewer knows, there is no other text which quite covers the same field. The purpose of *Normal and Elementary Physical Diagnosis* is to enable physical educators and others dealing with numbers of children to recognize abnormalities of various kinds so that they may be brought to the attention of medical personnel. Chapters are devoted to posture, skin, eyes, heart, common diseases, etc. A bibliography, glossary and index are included, as well as numerous illustrations, most of them taken from Drew, Bowen or other standard books. However, in a 1955 revision one hardly expects to find a table of heights and weights dating from 1912. The reviewer is frankly skeptical of the statement that the individual appearing in Fig. 11 is capable of pressing 215 lbs. "with little apparent effort" —or at all, for that matter. Certainly the weight which he is shown using appears to actually be 115 lbs.

PJR

"The Twenty-Third Annual Survey of Football Fatalities," by Floyd R. Eastwood, et al. (Free from Floyd R. Eastwood, Los Angeles State College.)

As in previous reports, football injuries are considered by position played, type of formation, offense or defense, etc. It would seem that after more than 20 years of such studies, we have probably learned all that is to be learned from them. It is noted "Helmets are still inadequate in construction and protection" and one wonders whether it would not prove more profitable to investigate each fatality to determine whether it could have been prevented by better equipment. Some of them certainly seem to reflect a need for better physical examinations.

PJR

"Swimming for the Handicapped, Instructor's Manual.
(Washington, D.C.: The American National Red Cross, 1955.
59 pp.)

Little organized material has been written and published in the specific area of swimming for the handicapped although this media of exercise is used extensively throughout the world. The American Red Cross has made an excellent contribution by publishing this manual which will probably have an important affect in organizing the thinking of those specialists already in the field as well as encouraging new people to enter this needed area of work.

The booklet contains information on facilities, equipment, understanding and teaching of the handicapped and specific programs for working with persons suffering from orthopedic, neurological, cardiac, deaf, blind and mental conditions.

This writer assumes that the booklet is primarily designed for the instruction of qualified personnel who possess the physiological and psychological background required to understand how this information may be properly applied. The major questions raised in the reader's mind after a perusal of this volume relate to the objectives of the program. Is the activity or skill of swimming the basic aim as suggested on p. 3 or is this a means for "increasing the range of motion" or "to produce a happy frame of mind" or "to attempt to restore the individual's self-respect" or to strengthen the "injured or weakened limb?" If we are to accept the primary objective as the teaching of swimming, the next logical question would concern the person who already possesses the necessary skills in swimming. Would this fact mean that the activity would not be beneficial to him? The answer seems obvious. The teaching and the therapeutic aspects of the program cannot be separated. The question is not only whether the patient can scull, tread water or swim the side stroke but also how this activity can play an important role in helping him to lead a more normal life, both physiologically and psychologically.

The reviewer was disappointed in the lack of recognition of the work being performed by corrective therapists throughout the United States in the specific use of swimming for the physically and mentally handicapped especially since acknowledgement was accorded related fields whose work is not as closely concerned with this modality. During World War II, the physical reconditioning instructors, now known as corrective therapists, played a leading role in developing the use of swimming activities for the physically and mentally disabled servicemen. This program, according to the pamphlet, resulted in the development of a similar program by the Red Cross.

Despite these omissions, the American Red Cross should be highly commended for publishing this monograph. The work should be considered as a new "swimming bible" for all corrective therapists, teachers of physical education and other specialists working with the handicapped.

"Nutrition Under Climatic Stress—A Symposium," Chicago:
Quartermaster Food and Container Institute for the Armed Forces, 1954. 204 pp. Free.

This is a report of a symposium sponsored by the U.S. Army Quartermaster Corps on December 4-5, 1952. The talks given and the discussion following them appear to be reported verbatim. In many instances a bibliography is cited. Any one interested in nutrition will find this book fascinating reading, especially, perhaps, Sir Hubert Wilkins' description of how to select personnel for explorations by taking them to dinner at an expensive restaurant! Daniels' discussion of "Physiological Responses of Men to Heat and Cold" is especially interesting. The book is filled with items of practical information which can be utilized by any reader living under conditions of climatic stress. For instance, supplemental thiamine is essential in hot climates, but the results of vitamin supplementation in cold climates has largely been negative, and extra protein is undesirable in cold. There is a wealth of information to be found in this text, and the Quartermaster Corps should be complimented both for having collected it and made it available in this form.

PJR

"Mental Health Through Physical Education and Recreation," by Emma McCloy Layman. Minneapolis: Burgess Publishing Company, 1955 pp. \$4.00.

Emma McCloy Layman, daughter of our distinguished Contributing Editor, C. M. McCloy, and Chief Psychologist at the Children's Hospital of the District of Columbia, has written what is probably the best presentation to date of the relationship of physical education to mental health. There is some question in the reviewer's mind as to just where such a book will be used. It appears to be designed as a college text, but so far as the reviewer knows the colleges do not offer courses in this particular subject.

Mrs. Layman approaches the subject from the stand-point of the psychologist, and most corrective therapists and other professional workers in the field are already thoroughly familiar with this approach. The first six chapters are devoted largely to a discussion of the factors involved in the development of personality and the adjustment of the individual to life situations. Chapter VII lists ten ways in which physical education and athletics contribute to mental health; Chapter VIII presents principles to be observed in working with children, organizing the teaching situation, etc.; Chapter X discusses the activity program in relation to the physically handicapped. These three chapters are the most important part of the book. One could wish that they had been expanded, even at the expense of some of the other material. The balance of the text takes up character building, counseling, group therapy, etc. A bibliography follows each chapter and an index is included.

PJR

"A Short History of Medicine," by Erwin H. Ackerknecht.
(New York: The Ronald Press Company, 1955. 258 pp.
\$4.50.)

Trained both as an M.D. and an anthropologist, Ackerknecht is admirably qualified to write a history of medicine. Starting with the fact that even the dinosaurs suffered from arthritis, osteomyelitis, tumors and caries, he ranges from paleomedicine down to that of the 20th century. In such a short book a great deal of material has to be omitted, but even at the cost of cutting out some of the lists of individuals prominent at one time or another we could wish that he had touched on such matters as the relationship between the Chinese acupuncture and the theories of Travell, the inspiration given by the work of Fernel to Sherrington's classic *Man on His Nature*, and the contribution of Wright to the *vis medicatrix naturae*. A few pages of pictures are included in the text. An Appendix contains a list of Nobel prize winners, Suggestions for Further Reading and an Index. It seems strange to find no reference to the Kaplan translation of Duchenne's monumental *Physiology of Motion* or to that most popular of all medical biographies, *The Story of San Michele*, in the reading list. Too, Zinsser's *Rats, Lice and History* would seem to deserve a place here. Ackerknecht mentions both physical therapy and occupational therapy, but seems to be unaware of corrective therapy. Yet these are but minor flaws in what is an excellent piece of work. The book is highly recommended to anyone desiring a concise, authoritative survey of the history of medicine. It is doubtful that a better one could be found at the present time.

PJR

"Form and Style in Thesis Writing," by William Giles Campbell.
(New York: Houghton Mifflin Company, 1954.
Plastic binding. 114 pp. \$1.75.)

The therapist who plans to prepare an article for publication will necessarily have to use the form required by the journal to which he intends to submit his paper. Even so, he will need some sort of a guide to which he can refer to settle the doubtful points which always arise. This is one of the best. It is easy to find the desired information, the instructions are explicit and the examples are plentiful. The text is definitely recommended to anyone having need for a guide to formal writing.

PJR

"The Importance of Physiotherapy in the Treatment of Sick Children," by J. M. Jewry-Hargert. (London: Staples Press, Ltd., 1955. Distributed in the U. S. by John De Graff, Inc., New York. 84 pp. \$2.50)

This book was written and published in England where it is said to be "the first book to be published solely for the guidance of the physiotherapist who chooses to work in the field of pediatrics." The book is written by a physiotherapist who clearly presents many children's diseases with the pathology and treatment methods as gathered from her lengthy experience in working with the sick.

This volume could have been a very fine guide for students and new therapists if the author had not repeatedly taken it for granted that the reader was completely familiar with the illnesses and treatments described. A few such examples include: "The child who is suffering from chorea is no new experience for any physiotherapist;" in reference to rheumatoid arthritis—"the symptoms are very similar to those which are all too familiar with most of us;" in reference to talipes equino-varus—"this very common foot deformity is a familiar one to us all;" in reference to torticollis—"the manipulations for the slight cases are so familiar that there is no need to repeat them here," etc. As a result of such presumptions the author does not explain the pathology or treatment for many types of cases that warranted further description to the student or new therapist.

In spite of this, therapists working with children probably will find valuable suggestions and techniques that will reward them for time spent in reading this short manuscript.

HJB

"Physiology of Work and Play," Sarah R. Riedman. (New York: The Dryden Press, 1950. 584 pp. \$5.50)

As a matter of policy this *Journal* would not ordinarily review a text six years old. An exception is made in this case because the book is directly concerned with one of the fields of greatest importance to corrective therapists—the physiology of exercise—and because it was completely unknown to the reviewer. The book is too good to go unnoticed because it has not been extensively advertised. As would be expected, the text shows its age in certain respects; there are sections which need to be revised and brought up to date in the light of more recent studies. An objectionable feature is the author's habit of referring to the findings of experimental studies without furnishing a citation to the source. The presentation of the material is less technical than is the case with Karpovich or Morehouse and Miller, and for that reason it should prove easier to understand by those who lack a good basis in physiology. There are many illustrations (drawings) and an index. Each chapter is followed by a bibliography. Therapists will find Chapter 23, "Convalescence and Reconditioning" of particular interest. Allowing for the age factor, the book is recommended as an excellent addition to the library of any one interested in the physiology of exercise. The book deserves to be kept in print and the reviewer hopes that a revised edition may be available in the not too distant future.

PJR

"Physics for Medical Students," by J. S. Rogers .Third Edition. (Melbourne: Melbourne University Press, 1953. Distributed in the U. S. by Cambridge University Press, New York, N. Y. 405 pp. \$5.50)

The purpose of this book is to show the applications of the principles of physics to physiology and medicine. For a textbook it has some rather curious omissions. Electroencephalography and electrocardiography are covered, but not electromyography. Thermocouples are described, but not thermistors. There is no material on direct methods of blood pressure reading, ultrasonics, galvanic skin reflex equipment or the effects of increased water to air pressure. The important subject of body mechanics is completely omitted. In these days of Hurricane Mesa and White Sands it is surprising to find no discussion of the problems of acceleration, deceleration or weightlessness. Surely the current crop of medical students must be trained to solve these problems. As the book is written by a professor at Melbourne University, Australia, there are occasional language difficulties. "Thermionic valves," for instance, turn out to be vacuum tubes. There are very few bibliographic entries,

which is highly disadvantageous to the student. On the credit side, the style of writing is clear and readable and the text is profusely illustrated. The faults of the book are mainly those of omission. By taking care to provide the missing material the next edition of this text could prove to be a highly satisfactory volume.

PJR

"Industrial Recreation," by Jackson M. Anderson. (New York: McGraw-Hill Book Company, Inc., 1955. 303 pp. \$5.00)

During the past few decades, physical education has been accepted as basic background in a number of new areas of work. In the industrial world, along with the progression of labor and management, recreation for personnel was introduced. This opened another new area of specialty for the physical educator.

Dr. Anderson, one of the nation's leaders in this field, has contributed the first book to be written on this subject. This book may be used as a guide to industrial recreation personnel, a text for the student or a reference book for all recreation and physical education people.

The book is divided into three sections: the first deals with principles and policies; the second contains information on the planning and programming of activities; and the third is concerned with the organization and administration of industrial recreation.

The author quotes extensive research studies in the field as well as describing many actual effective programs in industry throughout the United States. He explains the growth and development of industrial recreation, the type of personnel desired, methods of financing, the keeping of records, types of facilities and equipment, techniques for evaluation, etc.

This book is a well organized, complete and valuable piece of work that is written clearly, concisely and is quite readable. It is a must for all professional people in the industrial recreation field and should be read by professional personnel in recreation and physical education. There are voluminous ideas and recommendations that can be carried over into all related fields.

HJB

"Football Injuries Survey for 1953 Season," by G. Kenneth Hawk. Free from Floyd R. Eastwood, Los Angeles State College.

This comprises statistical material prepared from data furnished by athletic trainers or their assistants from 86 colleges or universities. Football injuries are considered by situation, weeks of the season, practice time and game time. Occasionally there is a useful suggestion, such as "we can see a great need for a more effective 'Shoulder Girdle' warmup," but most of the material is not of a nature that will be directly useful to trainers in preventing or treating accidents.

PJR

"Nutrition and Disease," by Tom D. Spies et al. (Reprint from Postgraduate Medicine, Vol. 17, No. 3, March, 1955. Paperbound. 96pp.)

The articles in this booklet deal principally with examples of dietary deficiency diseases. It is the writers' thesis that diseases are chemical in origin and that deficiency states can be treated only by supplying the missing chemicals.

PJR

BOOKS RECEIVED

"Dry Milk Products—a Symposium," (Washington: National Academy of Sciences—National Research Council, 1955. 194 pp. Free.)

"Health and Physical Education Microcard Bulletin," (Eugene, Ore.: School of Health and Physical Education, Univ. of Oregon, 1955. 23 pp. Free.)

"Physical Capacities and Job Placement," by Bert Hanman. (Distributed in the U. S. by John De Graff, Inc., New York; 167 pp. \$5.00).

Previously reviewed—Vol. 7, No. 6, Nov.-Dec., 1953.

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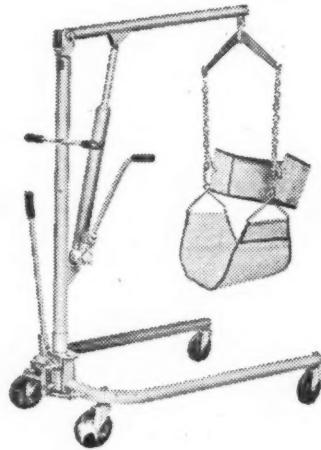
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AMPUTATION

Shepherd, Vivian (Rehabilitation Institute, 3600 Troost Ave., Kansas City, Mo.)

Amputee training in a rehabilitation center. *Orthopedic & Prosthetic Appliance J.* June, 1955, 9:2:49-52.

Rather than a technical description of amputee training, this article points out the many factors that must be considered in successful amputee rehabilitation and the worth of cooperative effort on the part of the physician, the prosthetist, the rehabilitation center, state vocational services, and other agencies to achieve satisfactory and complete rehabilitation of the amputee.

ARTHRITIS—MEDICAL TREATMENT

Bunnell, Sterling (516 Sutter St., San Francisco 2, Calif.)

Surgery of the rheumatic hand. *J. Bone and Joint Surgery.* July, 1955. 37-A:4:7569-766, 808.

Surgical methods for the correction of deformities of the hand resulting from rheumatoid arthritis are discussed. Dr. Bunnell stresses the necessity of early preventive treatment of arthritic contractures of the hand in stages where conservative methods are not only of avail, but where the results obtained are far superior to any operative achievement accomplished in later stages. A discussion of Dr. Bunnell's paper by Dr. Arthur Steindler is appended.

Lowman, Edward W. (Dept. of Physical Medicine and Rehab., N. Y. Univ. Coll. of Medicine, 477 First Ave., New York, N. Y.)

Rehabilitation of the chronic rheumatoid arthritic: a two-year progress report. *Archives of Physical Med. and Rehabilitation.* July, 1955. 36:7:431-434.

A report of a research program at Goldwater Memorial Hospital, consisting of 25 beds staffed with a rheumatologist, psychiatrist, psychologist, psychiatric social worker, nurse and physical and occupational personnel. Of the 38 patients treated, 18 were severely disabled, and of these 14 have been discharged, 7 being totally self-sufficient and 1 as job-placed. "The other 7 have been discharged partially self-sufficient with an average increase of 26% in functional capacity. Four patients of the group remain custodial hospital cases; among these there has been a 20% increase in function." Of the 20 less severely disabled, all were discharged, 15 as totally self-sufficient while the remaining partially so with an average increase of 20% in function. Seven of these 20 have been placed in full-time jobs.

Lowman, Edward W. (400 E. 34th St., New York, N. Y.)

Total rehabilitation of the rheumatoid arthritic cripple, by Edward W. Lowman, Philip R. Lee, and Howard A. Rusk. *J. Am. Med. Assn.* August 13, 1955. 158:15:1335-1344.

A report based on findings of the first two years' experience with a group of rheumatoid arthritic patients treated at Goldwater Memorial Hospital, New York, with a combined cortisone and rehabilitation program. Method of treatment and evaluation, results and the problems inherent in maintaining the functional gains brought about by treatment are discussed.

BLIND—PROGRAMS

Williams, Russell C. (Blind Rehab. Section, V.A. Hosp., Hines, Ill.)

Therapy for the newly blinded, as practiced with veterans, by Russell C. Williams and Maxwell D. Flank. *J. Am. Med. Assn.* July 9, 1955. 158:10:811-818.

New processes in treating blinded patients include longer hospitalization with conditioning for discharge, conditioning accomplished by an environmental therapy depending heavily on activity and the personal influence of seeing technicians presided over by blind technicians. An estimate is made of the patient's chances for success with the therapy before admission to treatment; the entire therapy process is not vocational training but a means of transition both emotionally and physically. The therapeutic process is used in the physical medicine and rehabilitation service of Hines V.A. Hospital.

CHRONIC DISEASE

Rusk, Howard A. (400 E. 34th St., New York, 16, N. Y.)

Dynamic therapeutics in chronic disease. *Cincinnati J. Med.* June, 1955. 36:6:233-240. Reprint.

With the increase in the average length of life and incidence of chronic disease and disability, the need for more comprehensive rehabilitation programs becomes evident. Dr. Rusk points out the inadequacy of present facilities to meet the problems of the chronically ill and discusses rehabilitation services in New York City hospitals. Problems in the management of hemiplegic, amputee, quadriplegic, and multiple sclerosis patients are considered.

CHRONIC DISEASE—ETIOLOGY

Zeman, Frederic D. (111 E. 38th St., New York 28, N. Y.)

Genetic factors in the diseases of later life. *J. Chronic Disease.* July, 1955. 2:1:11-27.

In same issue: The genetic background of chronic diseases (an editorial), by Bentley Glass. pp. 96-102.

" . . . hereditary disorders persisting into later life have been considered as the results of the interaction of genetic traits and the aging process; and particularly with reference to their participation in dynamic disease processes in which late sequelae assume overshadowing importance . . ." A wide range of genetically determined pathological processes encountered in middle age and old age are discussed.

The editorial discusses the role of genetic factors in the occurrence of various types of chronic disease and what research has shown in regard to the influence of genes on disease.

HEMIPLEGIA

Fields, Albert (523 W. 6th St., Los Angeles, Calif.)

The hemiplegic's friends and relations. *Med. Times.* July, 1955. 83:7:688-691. Reprint.

Treatment of emotional aspects of hemiplegia is as important as treatment of physical disabilities; family attitudes and situations can influence the progress of recovery. Group therapy is valuable and should be more widely used with families of aphasic patients. With persistent speech therapy most aphasics can be improved. The aim of occupational therapy should be self-care and gainful employment rather than diversional.

Van Buskirk, Charles (Univ. of Minn. Hospitals, Minneapolis 14, Minn.)

Return of motor function in hemiplegia. *Neurology.* Dec., 1954. 4:12:919-928. Reprint.

"The ability to learn simple motor tasks was studied in a series of 39 hemiplegic patients. It was determined that, although dexterity is increased on the paretic side, the ability to learn remained equal to that of the nonparetic side. Learning on both the paretic and nonparetic side is more satisfactory during the first two months after onset of the disability. Where the disability has been present longer, there is less likelihood of learning occurring. Restitution of function following cerebral injury occurs chiefly in the first two months and appears to be a spontaneous process."—Summary.

HEMIPLEGIA—MEDICAL TREATMENT

Fields, Albert (523 W. 6th St., Los Angeles, Calif.)

Sympathetic blocks in rehabilitation of hemiplegics. *Medical Times*. June, 1955. 83:6:558-562. Reprint.

"1. The incidence of cerebrovascular accidents is increasing. 2. Mortality can be reduced and extent of recovery increased by improved therapy. 3. Good nursing care, better medications, family cooperation, an early rehabilitation program are essentials. 4. Prolonged cervical sympathetic blocks are of benefit in old hemiplegics as well as in acute cerebrovascular accidents."—Author's summary.

Sheely, R. F. (267 Baltimore St., Gettysburg, Pa.)

Effect of cortisone and hydrocortisone in hemiplegia after cerebral infarction; 1. Preliminary report, with special reference to spasticity, by R. R. Sheely (and others). *J. Am. Med. Assn.* July 9, 1955. 158:10: 803-806.

"Four patients with residual spastic defects following cerebral infarction were treated with hydrocortisone (three cases) and cortisone (one case) in conjunction with physical therapeutic measures. Following the use of corticosteroids, a marked decrease in painful spasticity was observed. Hydrocortisone and cortisone appear to be definite adjuncts to physical therapy in rehabilitation of these patients . . ."—Summary.

Beach, Thelma L.

Recovery from stroke. *Today's Health*. Sept., 1955. 33:9:36-37, 52.

A daughter's personal account of her mother's experience after suffering a stroke brings encouragement and the hope of self-sufficiency to the patient who is willing to make the effort toward rehabilitation. Ways in which the family of the patient can help in recovery are suggested.

Kenrick, Margaret (65-42 75th Pl., Middle Village, L. I., New York)

Post-operative rehabilitation in hip arthroplastics, by Margaret Kenrick and K. G. Hanson. *Archives of Physical Med. and Rehabilitation*. July, 1955. 46:7:434-438.

In same issue: Rehabilitation of cup arthroplasty, by Terry B. Jones, Carol Larson, and W. D. Paul, p. 439-445.

"A program of rehabilitating patients with femoral head replacements is offered including the following points: Importance of knowing type of approach, mode of dislocation and result of surgeon's test of stability during surgery; motions and positions to be avoided early; necessity of explaining overall regime to patient . . ." The graduated exercise and activities program is described.

In the second article, the authors have reviewed after 6 months to 4 years 192 cup arthroplastics. Three-fourths were rated good.

HOME ECONOMICS

Harris, R. (Rehab. Unit, Devonshire Royal Hospital, Buxton, Eng.)

Rehabilitation of the disabled housewife; report of a year's work, by R. Harris and J. B. Millard. *Annals Phys. Med.* Apr., 1955. 2:6:201-206.

"A unit for retraining the seriously disabled housewife is described and a report of the results of its first year's work is presented. Among the subjects taking part were 59 with rheumatoid arthritis, 7 who had had a hip operation, 7 with neurological conditions, 4 who had sustained a major fracture, 3 with extensive burns, and 1 with osteoarthritis of both knees. Of the 81 subjects, 23 were incapable of any housework and 44 capable only of minor housework at the outset. At the end of training no subject was completely incapable of housework, and 52 subjects were able to run a normal household."—Summary.

OCCUPATIONAL THERAPY

Owen, Trevor (Univ. of Toronto, Ont., Canada)

Occupational therapy and neurological disorders. *Canadian J. Occupational Therapy*. June, 1955. 22: 2:37-40.

Defines the effects of neurological disorders and the resulting disabilities which the occupational therapist must understand before initiating treatment. Through personal contact with the patient, the therapist can stimulate his efforts to try to overcome his disability.

OLD AGE—EMPLOYMENT

Lehman, Harvey C. (173 Grosvenor St., Athens, Ohio)

Jobs for those over sixty-five. *J. Gerontology*. July, 1955. 10:3:345-357. Reprint.

"By use of the U.S. census reports for the years 1890 to 1950 (with the exception of 1910) this study seeks to identify those specific occupations from which older men and women who work at paid jobs are least likely to be crowded out by younger ones. It sets forth those occupations which have included twice or more than twice their proportionate share of workers of age 65 or over . . . The problem posed by the differential age changes are occurring in the population of the United States and the growing tendency to exclude a larger proportion of older people from the labor market is discussed."—Summary.

OLD AGE—EMPLOYMENT—BIBLIOGRAPHY

U.S. Women's Bureau

Bibliography on employment problems of older women; hiring restrictions, psychological barriers, work performance. Washington, D. C., Gov't. Print. Off., 1954. 89 p. (D-70)

An annotated bibliography, alphabetically arranged by author or organization responsible for the report, which covers books, pamphlet, and periodical material relating to the three aspects of employment mentioned in the title of the bibliography. A subject index provides quick reference to all sources containing information on specific subjects.

Available from U.S. Superintendent of Documents, Washington 25, D.C., at 35c a copy.

OLD AGE—MEDICAL TREATMENT

Abramson, Arthur S. (130 W. Kingsbridge Rd., Bronx 68, N. Y.)

Rehabilitation in geriatric practice. *Canadian Med. Assn. J.* Mar. 1, 1955. 72:5:327-334. Reprint. Gives definition of rehabilitation, describes the aging process, and tells briefly some of the aspects of cardiac rehabilitation. The discussion of the hemiplegic is more extensive since this clinical state was selected to illustrate some of the principles underlying the rehabilitation process.

Vine, S. M.

Clinical pitfalls in the elderly. *Lancet*. July 16, 1955. 269:6881:103-106.

The author reviews the medical problems found in some 600 elderly women whom he has treated in their homes in a period of 14 months. "My idea of the practical medicine of the elderly is founded on three principles: 1) The elderly shall receive the same skilled attention as younger patients do. 2) Any patient whose illness or disability begins over the age of 65 either dies or can be reabled within one year, except when advanced mental change is present. 3) A hospital is not a permanent residence . . ."

OLD AGE—MENTAL HYGIENE

National Association for Mental Health (1790 Broadway, New York 19, N. Y.)

Notes for after fifty. New York, The Assn., 1955. 6 letters.

Contents: 1. Planning for your later years. 2. Improving and keeping your health. 3. Slowing down and enjoying it. 4. Making the most of your abilities. 5. Preparing to live on less. 6. You, your home, your family and friends.

A series of six letters addressed to employed people from 50 to 60 years of age, to help them with the problems of their approaching retirement. They discuss in a personal way the problems which persons of that age are likely to have and ways of meeting them as they arise.

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PARALYSIS

Yuhl, Eric T. (Div. of Neurology, Univ. of Chicago Clinics, 950 E. 59th St., Chicago, Ill.)

Diagnosis and surgical therapy of chronic midline cervical disk protrusions, by Eric T. Yuhl (and others). *Neurology*. July, 1955. 5:7:494-509.

Describes the clinical experiences in a series of 32 patients operated on for the syndrome of chronic compression of the cervical spinal cord due to long-standing intervertebral disk protrusion or bony ridges secondary to such protrusions, so-called hypertrophic osteoarthritis of the spine. Discussed are symptoms, clinical findings, operative treatment and complications, and follow-up results, which in this series of patients suggest that a simple posterior decompression is a valuable therapeutic procedure. Early diagnosis and treatment is particularly important and improvement should be expected only in early cases.

PARALYSIS AGITANS

Magee, Kenneth R. (Univ. of Mich., Ann Arbor, Mich.)

Parkinson's disease: 1. Neurologic management, by Kenneth R. Magee. 2. Nursing care, by Alta Elliott. *Am. J. Nursing*. July, 1955. 55:7:814-818.

Discusses the etiology, pathology, symptoms, types of parkinsonism, and the medical treatment. The second part of the article on nursing care of the patient with parkinsonism covers aims of the therapeutic program, the nurse's role in teaching the patient about the disease and its management, and the role of the family in aiding the patient to maintain psychological and social adjustment.

PHYSICAL EFFICIENCY

Kurtzke, John F. (V.A. Hosp., Bronx, N. Y.)

A new scale for evaluating disability in multiple sclerosis. *Neurology*. Aug., 1955. 5:8:580-583.

"A new classification of disability in multiple sclerosis is presented wherein a status number is provided in accordance with the patient's impairment due to neurologic dysfunction. The scale consists of ten progressive steps or classes. The scale has been applicable in the more than 300 patients studied at this hospital, and has proved satisfactory in measuring change in status of these patients during hospitalization."—Summary.

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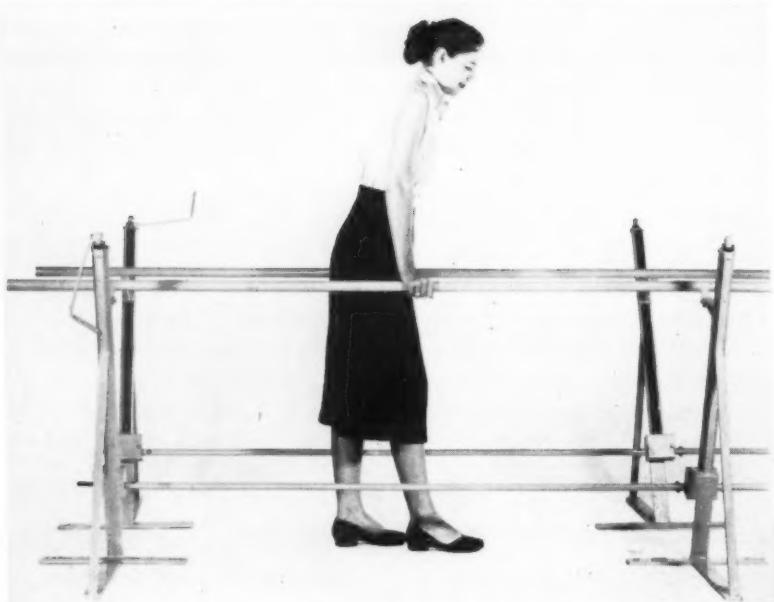
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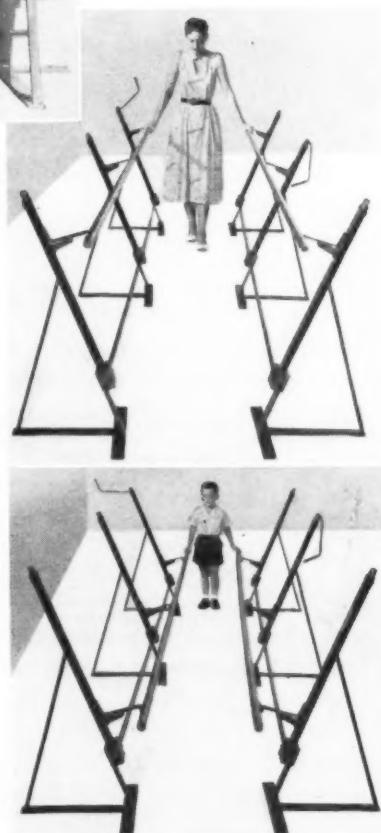
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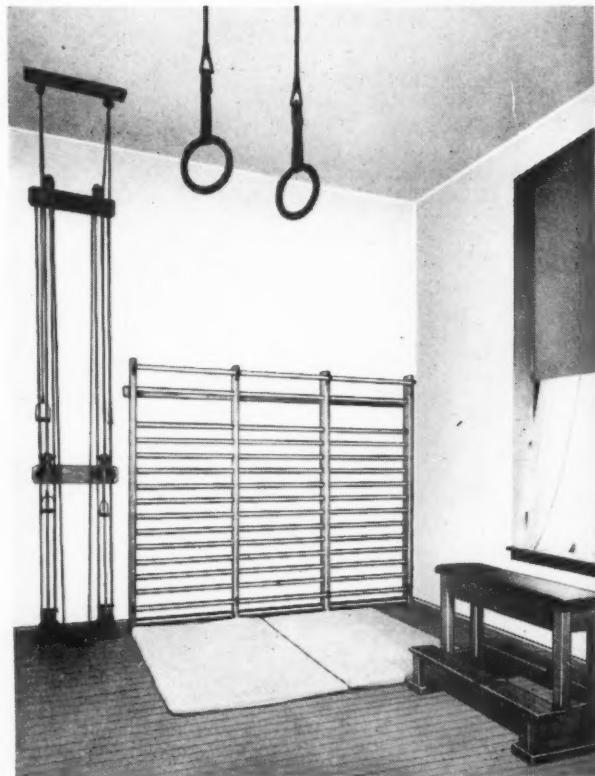
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